ORDER NO. VRD8802M109

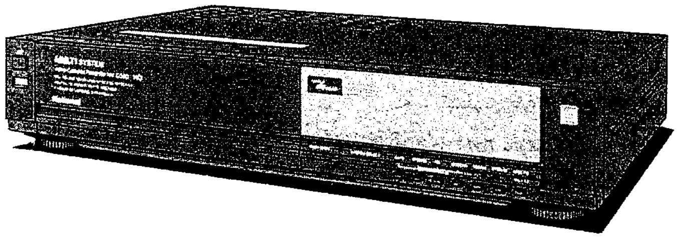
Service Manual

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List

Video Cassette Recorder

National VHS HQ
PAL SECAM NTSC

NV-G500EM



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SPECIFICATIONS

ITEM	SPECIFICATION
POWER	SOURCE: 110~240V 50/60Hz
	CONSUMPTION: 27 watts
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL, SECAM, NTSC
TV TUNER SYSTEM	VHF Ⅰ: NTSC; CH2~CHA-3 75Ω unbalanced PAL/SECAM B·G·D·K·I; CHE2~CHS3 (CHE2~CHE4, CHS1~CHS3) 75Ω unbalanced VHF Ⅲ: NTSC; CHA-2~CHW 75Ω unbalanced PAL/SECAM B·G·D·K·I; CHM1~CHU10 (CHM1~CHM10, CHE5~CHE12, CHU1~CHU10) 75Ω unbalanced SECAM L; CHB~CHQ 75Ω unbalanced UHF: NTSC; CH14~CH69 75Ω unbalanced PAL/SECAM B · G · D · K · I; CH21~CH69 75Ω unbalanced SECAM L; CH21~CH69 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4, 73±3dBμ, 75Ω unbalanced (NTSC/PAL G/PAL I/SECAM K)
VIDEO	HEADS: 4 rotary heads 1 pair for recording, playpack (L-R heads) 1 pair for trick play (L′-R′ heads)
	INPUT: VIDEO IN Connector (PHONO type) 1.0Vp-p, 75Ω terminated
VIDEO	OUTPUT: VIDEO OUT Connector (PHONO type) 1.0Vp-p, 75Ω terminated
AUDIO	HEAD: 1 Stationary head
	INPUT: AUDIO IN Connector (PHONO type), more than −10dBV (316mV), more than 50kΩ
	OUTPUT: AUDIO OUT Connector (PHONO type), −8dBV (400mV), more than 1kΩ
TAPE FORMAT	VHS Cassette tape (Tape width 12.7mm)
TAPE SPEED	PAL/SECAM; SP: 23.39mm/s PAL/SECAM; LP: 11.695mm/s NTSC; SP: 33.3mm/s NTSC; SLP: 11.1mm/s Record/Playback Time: SP; 4 hours with 240min. type tape (PAL/SECAM) 2.5 hours with 160min. type tape (NTSC) LP; 8 hours with 240min. type tape (PAL/SECAM) SLP; 8 hours with 160min. type tape (NTSC) FF/REW Time: less than 5.5min. with 180min. type tape
DIMENSIONS	430 (W) × 82 (H) × 370 (D) mm
WEIGHT	6.0kg
STANDARD ACCESSORIES	1pc. DIN-RF cable 1pc. Infra-red remote controller 1pc. Power plug adaptor 1pc. AC cord 1pc. Digital scanner 1pc. Digital scanner case 1pc. Cleaning brush

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

National

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

C-6-11

INTRODUCTION

This service manual contains technical information witch will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams wich give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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MECHANICAL REPLACEMENT PARTS LIST

ELECTRICAL REPLACEMENT PARTS LIST

SECTION 1

GENERAL DESCRIPTIONS

1-1 FEATURES

1. Slim Design and Front Loading System

   This highly functional design allows loading the video cassette from the front, thus minimizing the space required for the placement.

2. Multi-Function Display

   Whenever an operation button is pressed, the activated function is immediately indicated on this easy-to-see display. It shows you at a glance, in what operation mode the VTR is functioning.

3. Super Still,Super Still Advance and Double Super Fine Slow Playback

   Super Still, Super Still Advance and Double Super Fine Slow Playback are possible with superb picture quality free from noise and jitter.

4. Reception of up to 32 TV Stations

   The built-in tuner in this VTR allows pre-tuning of as many as 32 TV stations. So this VTR can accommodate virtually any increase in available TV programmes in the future.

5. Infra-red Remote Controller

   The Infra-red Remote Controller unit allows operating various functions from the comfort of your favourite viewing position.

6 Lap Time Counter

   The new Lap Time Counter is a great improvement over the approximate counter systems of conventional VTRs. It gives you an exact reading of the elapsed tape time in hours, minutes and seconds, and makes it easy to calculate the tape time left on a cassette.

7. LCD Digital Scanner

   This Digital Scanner makes it possible to programme timer recordings by tracing the corresponding bar codes on the supplied Programming Sheet. The traced programming data can be confirmed on the built-in Bar Code Reader Display before they are transmitted to the VTR at the push of a button.

8 Time Search

   It is possible to locate the desired scene directly by inputting the hour, minute and second of that scene.

9. Picture Sharpness Control

   With this control, the contours of the playback picture can be made sharper or softer.

10. Auto Voltage Selector

    This unit is equipped with an Automatic Voltage Selector. The unit can be used where the local voltage indication is between 110-240 V, without any manual voltage adjustment.

11. 1-Month Calender Timer

    The clock/timer of the VTR is programmed with the calendar up to the end of 2002, so it knows exactly what day of the week it is on any given date. Programming of as many as 4 timer recordings is possible up to one month in advance.

12. Auto Operation

    The extremely convenient Auto Operation functions of this VTR include Auto Start, Cue and Auto Play when a recorded cassette is inserted, Auto Eject which indicates that an inserted cassette is not suitable for recording, VTR-Off Eject for ejecting a cassette even with the VTR off, and Auto Rewind at the end of a tape. If the VTR On/Off Switch is pressed during the rewind mode including Auto Rewind, the VTR will eject the cassette and turn itself off when rewinding is completed (Rewind Shut Off).

13. Super OTR Function(One-Touch Timer Recording)

    This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start or with start within 24 hours by precisely setting the starting time and ending time to the desired minute. When the recording ends, the VTR will automatically turn itself off.

14. HQ(High Quality) Picture System

    Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

15. 8 Hours Recording and Playback

    The LP (SLP: NTSC) mode with a maximum recording and playback time of 8 hours on a NV-E240 (NV-T160: NTSC) video cassette gives you double savings in tape costs and storage space.

16. Recording and Playbak are possible with PAL, SECAM , MESECAM , NTSC 3.58MHz or NTSC 4.43MH System

    This unit is designed for recording and playback of VHS recordings with PAL, SECAM, MESECAM, NTSC 3.58 MHz or NTSC 4.43 MHz (only dubbing) colour signals.

17. NTSC Playback Function

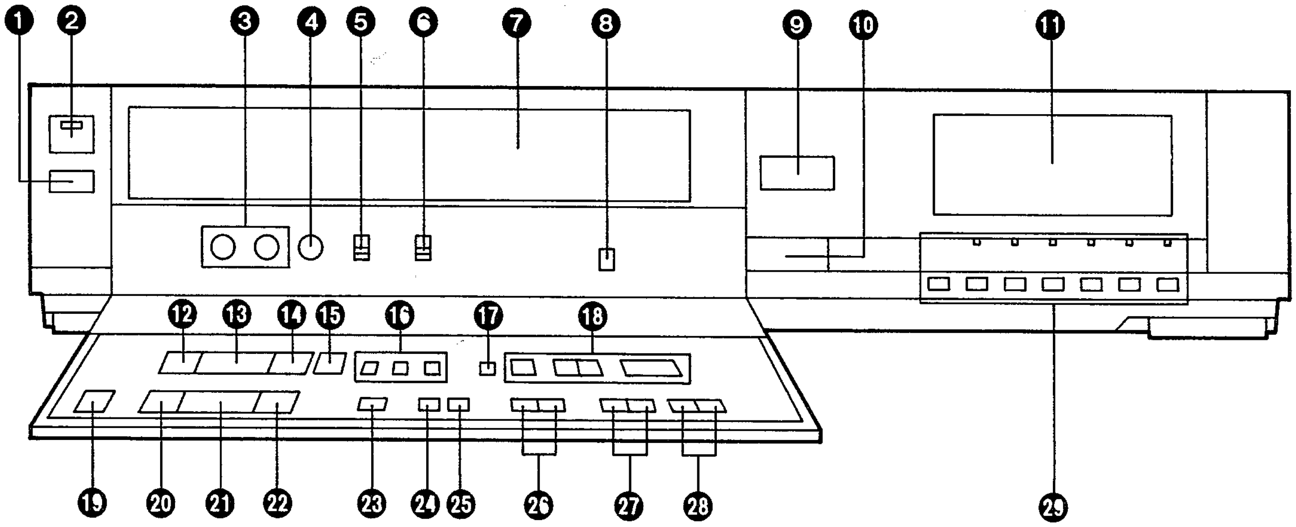
    Prerecorded NTSC system tapes and tapes recorded with NTSC system broadcasts can be played back on any PAL system television set.

18. Auto Tracking

    The tracking is automatically adjusted during playback.

1-2. CONTROLS & COMPONENTS

FRONT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❶ Cassette-in Indicator

❷ VTR On/Off Switch with Indicator

❸ Tracking Control

❹ Picture Sharpness Control

❺ Edit Switch

❻ Tape Speed Selector

❼ Cassette Compartment

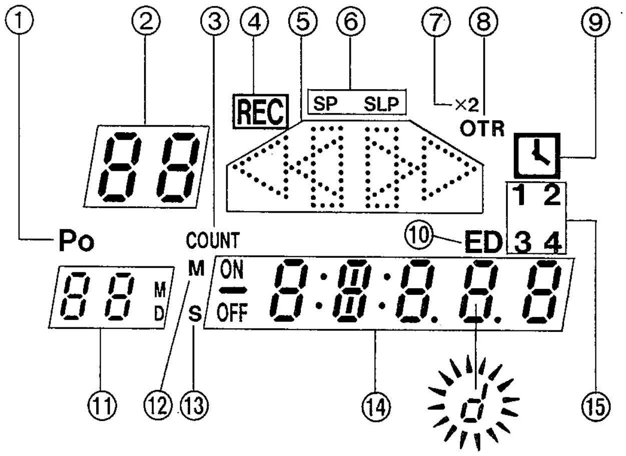
❽ Timer Record Button

❾ Infra-red Remote Control Receiver

❿ Control Panel Open Button

⓫ Multi-Function Display

Multi-Function Display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When dew forms:
Dew Indicator

① Position Indicator

② Channel Display

③ Tape Counter Mode Indicator

④ Recording Indicator

⑤ Tape Running Display

⑥ Tape Speed Indicator

⑦ Double Speed Indicator

⑧ OTR Indicator

⑨ Timer Recording Indicator

⑩ Everyday Indicator

⑪ Date Display

⑫ Memory Indicator

⑬ Search Lock Indicator

⑭ Clock/Counter Display

⑮ Timer Programme Number

⓬ Rewind ◀◀/Review ⊟ Button

⓭ Play Button (▶)

⓮ Fast Forward ▶▶/Cue ⊟ Button

⓯ Slow Button (▮▶)

⑯ Tuner Set-up Controls

	VHF		UHF
	I	III	U
NTSC	2-A-3	A-2-W	14–69
PAL/SECAM B•G D•K I	E2–S3 (E2–E4 S1–S3)	M1–U10 (M1–M10 E5–E12 U1–U10)	21–69
SECAM L	——	B–Q	21–69

The tuner in the VTR can be preset for up to 32 stations.

⑰ Clock button

⑱ Timer Controls

⑲ Eject Button (▲)

⑳ Pause/Still Button (❚❚)

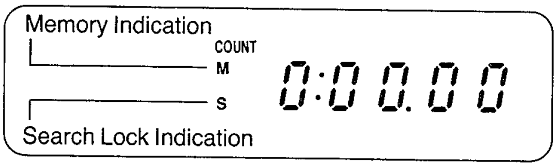
㉑ Stop Button (■)

㉒ Record Button (●)

㉓ Clock/Counter Selector

㉔ Memory/Search Lock Button

The Memory function makes it simple and fast to find a certain position on the tape later again, simply by pressing the Reset Button at that position to set the tape counter to "0:00.00" and by pressing the Memory/Search Lock Button. During Rewind or Fast Forward, the tape will then stop at approximately the desired position.



- Even if the Clock/Counter Display is switched over to "Clock" Display after pressing the Memory/Search Lock Button, the Memory function will stop the tape at the desired position.

㉕ Reset Button

㉖ Channel Selection Up and Down Buttons

㉗ OTR On Buttons

㉘ OTR Off Buttons

㉙ System Selector

This switch is normally set to the AUTO position except for playing back on the NTSC P•B and NTSC 4.43.
The position except for AUTO is as used for forced system switch. When the picture is not stable, use the unit with setting the switch to the TV system which is recording or playing back.

① **AUTO**
If the System Selector Button "AUTO" is pressed, the VTR automatically selects the colour system that corresponds to the programme to be recorded or played back, and the System Indicator Lamp for this system will light up.

② **NTSC 3.58**
This System Selector Button can be pressed, when the VTR is to be used for recording and playback of programmes in the NTSC 3.58 MHz colour signal system.

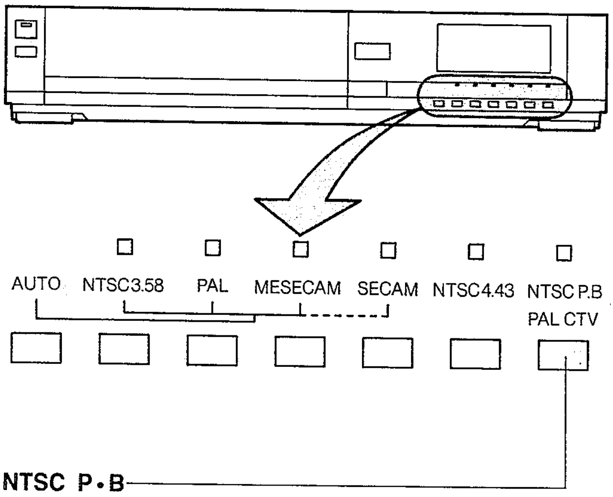
③ **PAL**
This System Selector Button can be pressed, when the VTR is to be used for recording and playback of programmes in the PAL system.

④ **MESECAM**
This System Selector Button can be pressed, when the VTR is to be used for recording and playback of programmes in the MESECAM colour signal system.

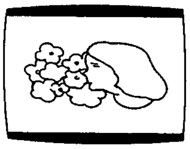
⑤ **SECAM**
This System Selector Button can be pressed, when the VTR is to be used for recording and playback of programmes in the SECAM colour signal system.

⑥ **NTSC 4.43**
This System Selector Button can be pressed, when the VTR is to be used for recording and playback of programmes in the NTSC 4.43 MHz colour signal system.

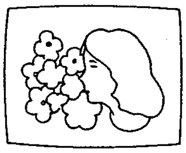
- Avoid pressing the buttons simultaneously.



This position is used for playback only of pre-recorded NTSC tapes via a PAL system TV set.



(NTSC P•B)



(NTSC 3.58, NTSC 4.43,
PAL MESECAM)

REMARK

The playback picture will shrink vertically, and black bars will appear both on the top and bottom of the screen. This is not an indication of a malfunction.

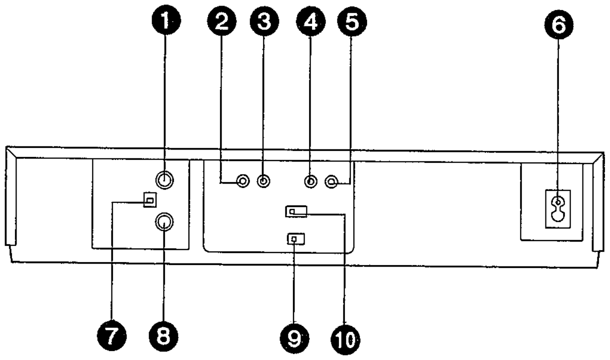
And the playback picture may roll up or down, and there may be no color in the picture.

If the picture should roll up or down, adjust it with the V-HOLD control on the TV.

When a multi-system TV is being used, upon playing back NTSC tapes, set the System Selector of the TV to "NTSC" (NTSC 4.43 MHz is not included). When NTSC system is not included, set the Selector of the TV to PAL after setting the System Selector of the VTR to "NTSC P.B".

- During Cue, Review or Still playback, the picture may not be in colour.

REAR



❶ RF Output Socket

❷ Audio Input Socket

❸ Video Input Socket

❹ Audio Output Socket

❺ Video Output Socket

❻ AC Mains Lead Socket

❼ RF Signal Level Switch

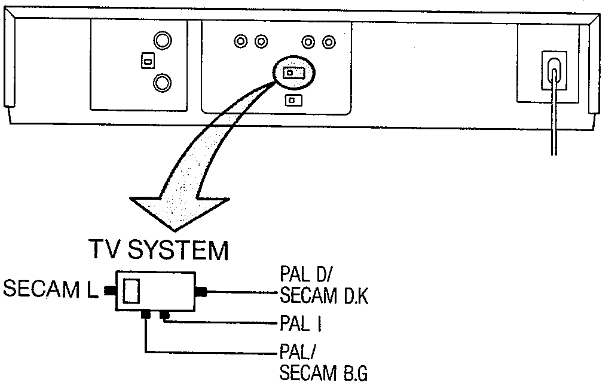
❽ RF Input Socket

❾ Test Signal Switch

❿ TV System Selector

This set offers full coverage video performance, thanks to NTSC/PAL/SECAM/MESECAM operation.

Use the TV System Selector to select the colour TV system used by the TV set to be connected.

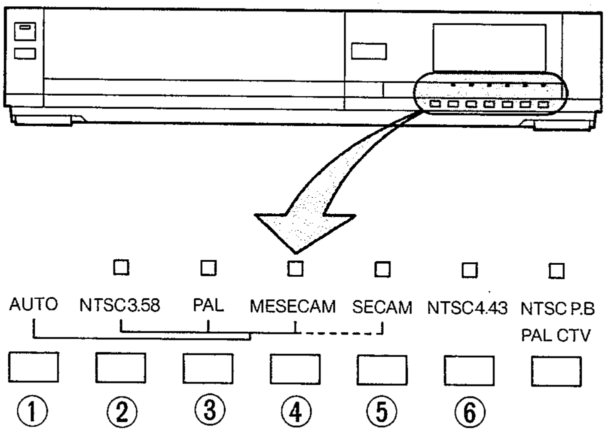


TV System Selector

Set this selector to the "SECAM L", "PAL/SECAM B•G", "PAL I" or "PAL D/SECAM D•K" position, depending on the type of PAL/SECAM colour system used for TV broadcasts in your area.

PAL-B•G: Continental Europe
PAL-I: U.K., etc.
PAL-D: China
SECAM L: France
SECAM B•G: Middle and Near East, East Germany
SECAM D•K: Eastern Europe, Russia

- For receiving NTSC broadcasts with the System Selector set to "AUTO", set the TV System Selector to any position except "SECAM L".
- When the TV System Selector is set to the "SECAM L" position, the signals will only be output through the Video Output Socket, not through the RF Output Socket.



REMARK

It is not possible to monitor the picture, when the colour system of playback picture and TV set is different. (except for NTSC P•B)

- **System Display Lamps**

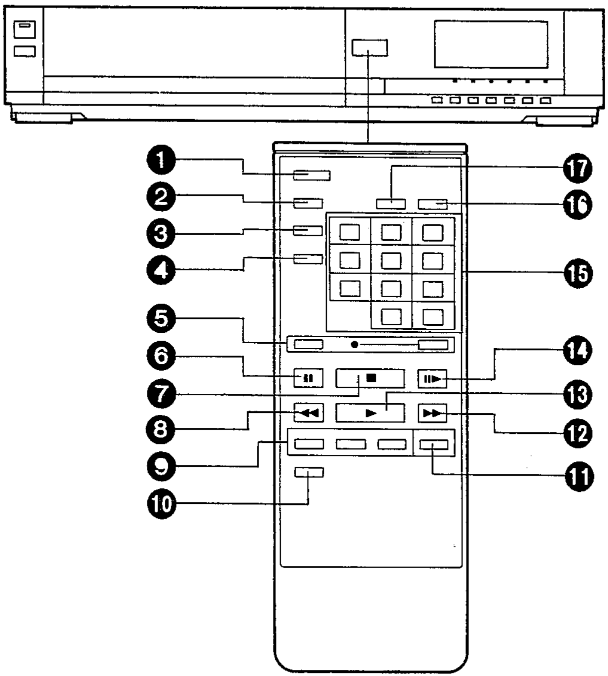
  The lamp corresponding to the mode selected by the System selector lights.

  When the switch is at the AUTO position

  - The lamp of the system being recorded or played back lights.
  - In case of black-white signal, the NTSC 3.58 MHz lamp lights when the only NTSC signals are being recorded or played back.

1-3. INFRA-RED REMOTE CONTROLLER

Part Number: VEQ0701



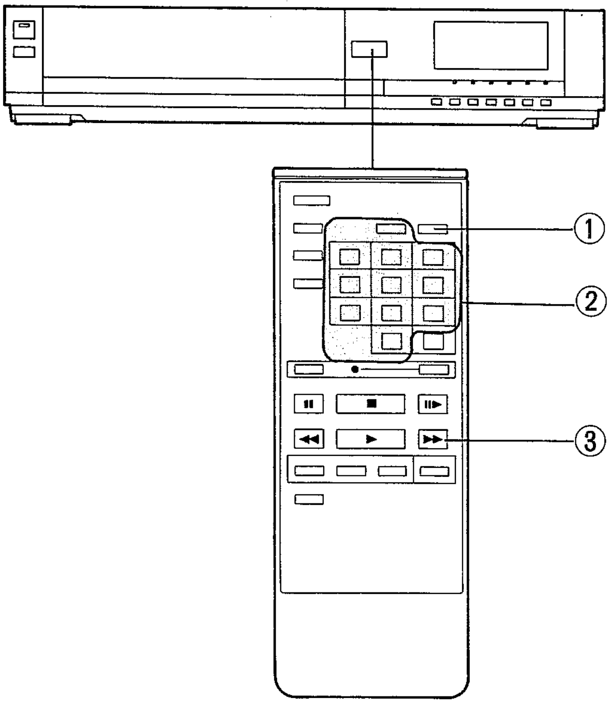
❶ **VTR On/Off Button**
❷ **Clock/Counter Selector**
❸ **Memory/Search Lock Button**
❹ **Reset Button**
❺ **Record Buttons (●)**
❻ **Pause/Still Button (❚❚)**
❼ **Stop Button (■)**
❽ **Rewind ◀◀/Review [◀◀] Button**
❾ **Slow Buttons**
❿ **Reverse Play Button**
⓫ **Double Speed Playback Button (×2)**
⓬ **Fast Forward ▶▶/Cue [▶▶] Button**
⓭ **Play Button (▶)**
⓮ **Still Advance Button (❚❚▶)**
⓯ **Programme Position Selector Buttons**

select channel	press button	
1–9	[1]—[9]	respective channel
10	[10/0]	
20	[-/-]→[2]→[10/0]	
11–32 for example 32	[-/-]→[3]→[2]	

If more than 5 seconds pass between the first, second and third push, the channel will not be changed normally.

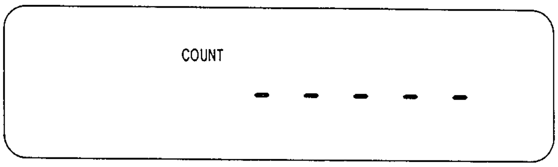
⓰ **Time Search Button**
⓱ **+/− Button**

It is possible to locate the desired scene directly by inputting the hour, minute and second of that scene.

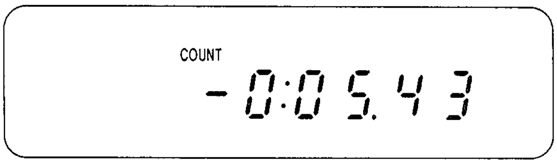


Put the VTR in Stop mode.

① Press the Time Search Button.
The indication in the Multi-Function Display changes as shown below.



② Input the time of the desired scene.
- The time is input by pressing the number buttons in the order: hour, minute, second.
- The "–" indication will be counted as "0".
- If you want to input an earlier time than "0:00.00", press the +/– Button so that the "–" indication appears ahead of the counter indication.



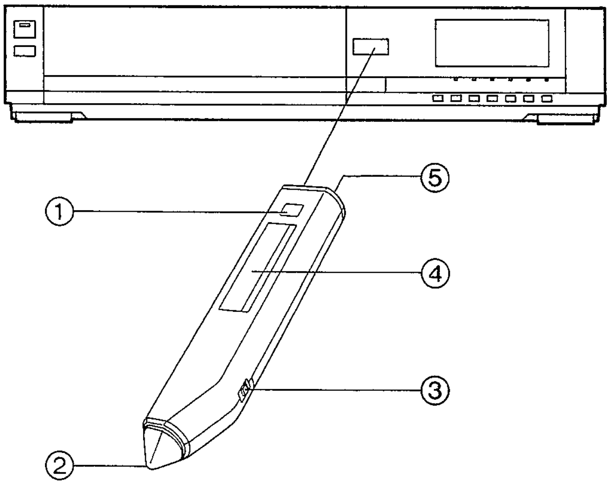
③ Press the Fast Forward ▶▶/Cue ⏩ Button.

- The VTR automatically judges whether the tape should be fast-forward or rewound and performs the appropriate operation.
- When the designated time is reached, the playback starts.

> - The numbers in the Tape Counter do not change during parts of the tape on which there is no recording.
> - When the tape is ejected, the Tape Counter will automatically be reset to "0:00.00".

1-4. DIGITAL SCANNER

Part Number: VEQ0705

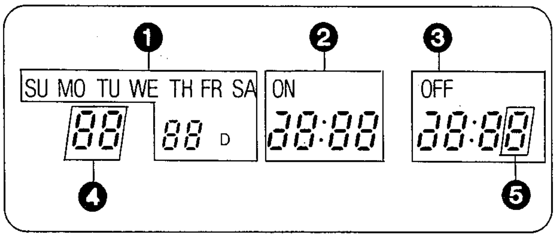


① **Transmit Button**

② **Bar Code Reading Section**

③ **Digital Scanner On/Off Switch**

④ **Bar Code Reader Display**



❶ Date Display

❷ Start Time Display

❸ End Time Display

❹ Channel Display

❺ Check Indicator

⑤ **Transmitting Section**

How to Operate the Digital Scanner

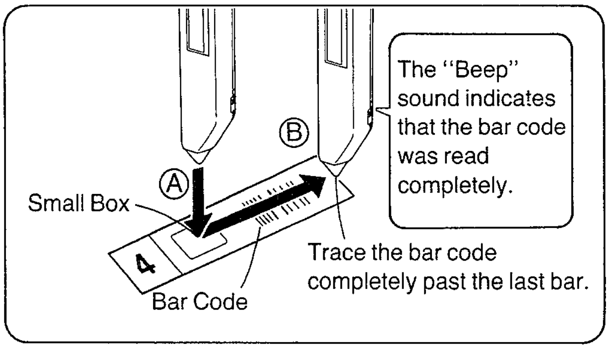
Set the Digital Scanner On/Off Switch to "ON".

- If no operation is performed for more than 25 seconds, the scanner will automatically switch over to the power-saving standby condition and the lamp will go off. (In this case, if bar codes have already been read but not yet transmitted to the VTR, the data will be cancelled.)
- When the Digital Scanner On/Off Switch is set to "ON" but the lamp is not lit, set the switch to "OFF" and then to "ON" again.

Tracing the Bar Codes

Ⓐ Place the Digital Scanner vertically on the Small Box.

Ⓑ Trace the bar code quickly in the direction of the arrow.

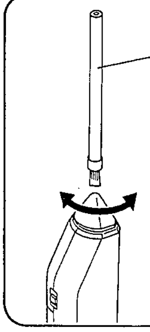


The "Beep" sound indicates that the bar code was read completely.

Trace the bar code completely past the last bar.

Cleaning Brush for the Digital Scanner

If the sensor in the tip of the Digital Scanner becomes clogged with dirt, it may become impossible to read the bar codes. Clean the tip from time to time with the supplied brush as illustrated below.
Keep this brush in the storage case of the Digital Scanner.



- Move the brush several times over the tip so that the hair enters the hole.

- Treat the Programming Sheet with care. If the sheet gets dirty or scratched, the bar code reading may become impossible.
- Protect the Digital Scanner from strong shocks and vibration. Keep it away from water and places with high temperature and humidity.
- If the bar code is traced slowly, it cannot be read correctly.
- When there is no "Beep" sound, the reading of the bar code is incomplete. Trace the bar code again.
- When using the Programming Sheet, put it on flat surface. Reading the bar codes while holding it in your hand or bending it, may result in incorrect operation.
- Do not deviate from the bar code, nor stop tracing halfway.
- Do not slant the scanner to trace the bar code.

Memo

SECTION 2
ADJUSTMENT PROCEDURES

2-1. MECHANICAL ADJUSTMENT PROCEDURES

This Mechanical Chassis of this model is the same as the G Mechanical Chassis.
Therefore please refer to the Service Manual G Mechanical Chassis (Order No. VRD8701105).

Note:
(How To Set The Tracking Volume For Centre.)
When Interchange ability Adjustment is performed, Tracking Volume have to be set electrical centre as follows:

(1) Connect the jumper wire W163 as shown below.

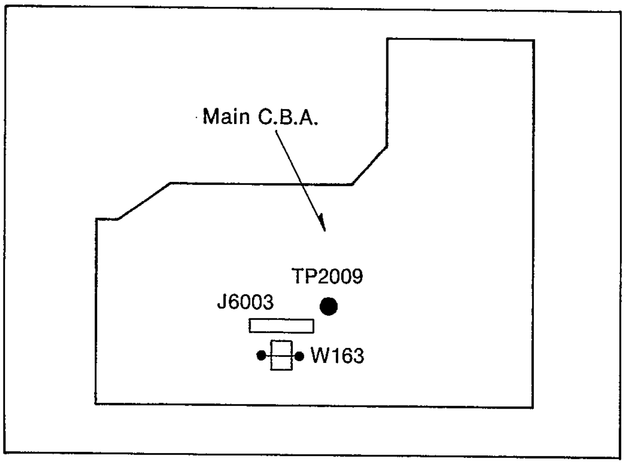

Main C.B.A.
TP2009
J6003
W163

Fig. M1

(2) Push the tracking volume (+) and (−) button togather. (tracking volume is set centre automatically).
(3) After adjusting, remove jumper wire W163.

2-2 DISASSEMBLY METHOD

2-2-1. DISASSEMBLY FLOWCHART

This flowchart indicates disassembly steps of the cabinet parts and the Circuit Boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

Note:
When removing the Front Panel, be careful to avoid any damages for the locking portions of the panel.

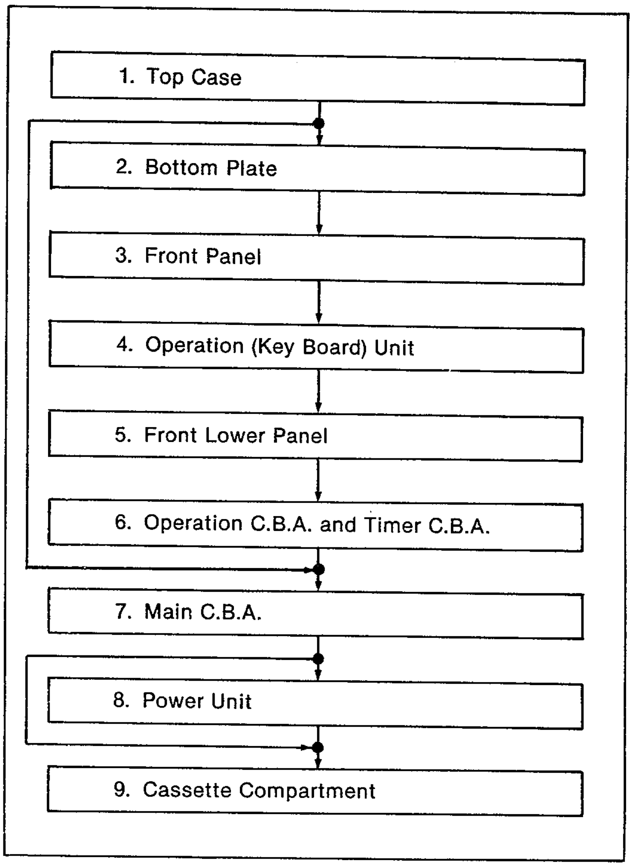

1. Top Case
2. Bottom Plate
3. Front Panel
4. Operation (Key Board) Unit
5. Front Lower Panel
6. Operation C.B.A. and Timer C.B.A.
7. Main C.B.A.
8. Power Unit
9. Cassette Compartment

Fig. D1

2-2-2. DETAIL OF DISASSEMBLY METHOD

1. Removal of the Top Case

   Remove the 4 screws (A) then carefully lift the rear of the Top Case to remove.

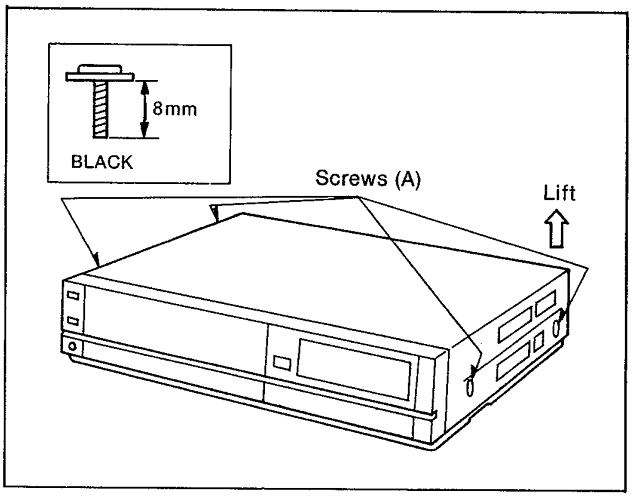

8mm
BLACK
Screws (A)
Lift

Fig. D2

2. Removal of the Bottom Plate

Place the deck upside down so that the bottom side faces upward.
Then remove the 8 screws (B)

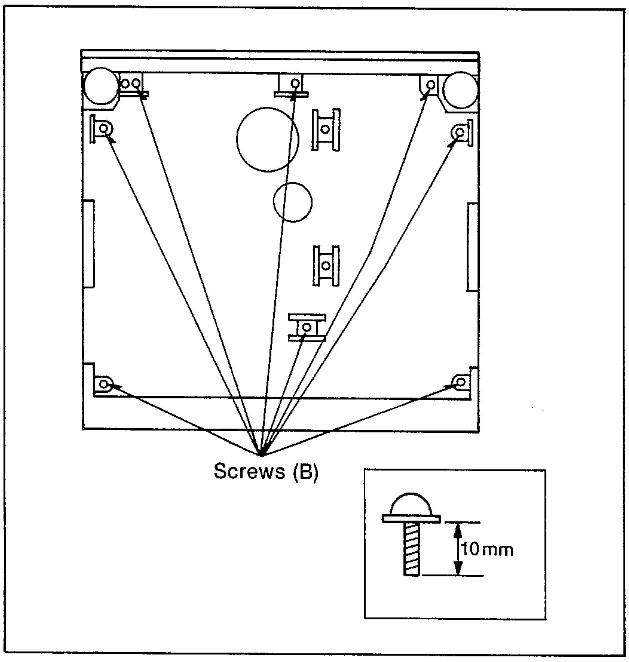

Screws (B)
10mm

Fig. D3

Note:
Place the cushion under the deck to avoid any damages.

3. Removal of the Front Panel

Open the Operation (key Board) Unit and remove the 3 screws (C) and unlock the 5 locking portions (D).
Then hold the top portion of the panel and turn it toward the front side of the deck to remove.

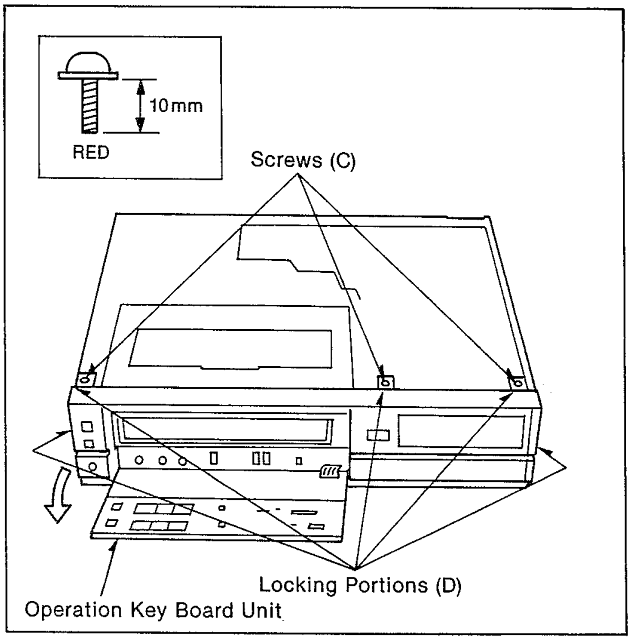

10mm
RED
Screws (C)
Locking Portions (D)
Operation Key Board Unit

Fig. D4

4. Removal of the Operation (key Board) Unit

Remove the 2 screws (E).
Disconnect the connector P7504(F) and remove the flexible wire.
Then carefully remove the Operation (key Board) Unit.

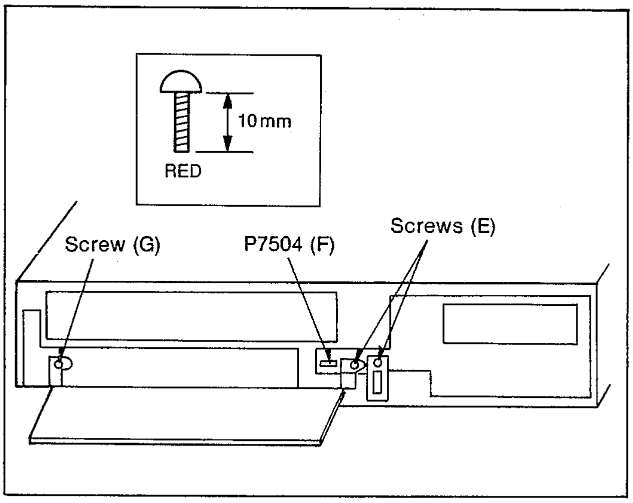

10mm
RED
Screw (G)
P7504 (F)
Screws (E)

Fig. D5

5. Removal of the Front Lower Panel.

Place the deck up side down so that the bottom side faces upward.
Then remove the 1 screw (G) and unlock the 3 locking portions (H).

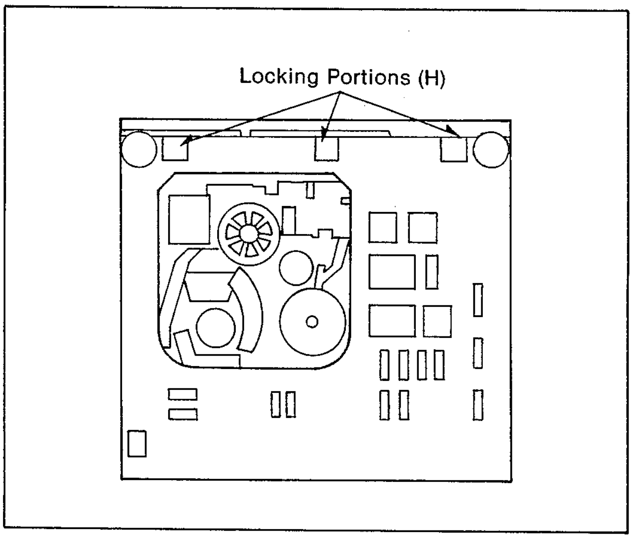

Locking Portions (H)

Fig. D6

Note:
Place the cushion under the deck to avoid any damages.

6. Removal of the Operation C.B.A. and Timer C.B.A.

   Remove the 5 screws (I) and unlock the 6 locking portions (J).

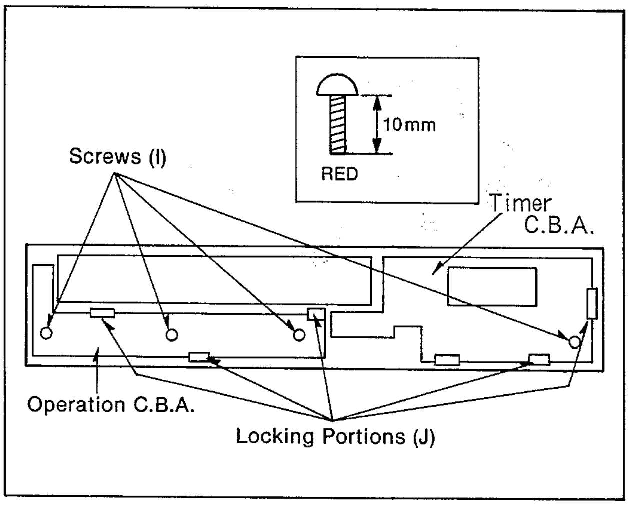

10mm
RED
Screws (I)
Timer C.B.A.
Operation C.B.A.
Locking Portions (J)

Fig. D7

7. Removal of the Main C.B.A.

   Remove the 1 screw (K) and C.B.Holder (L) take out the Main C.B.A. and 0.32H skew compensation C.B.A. Putting it up right position on the frame can be available as shown in Fig.D9.

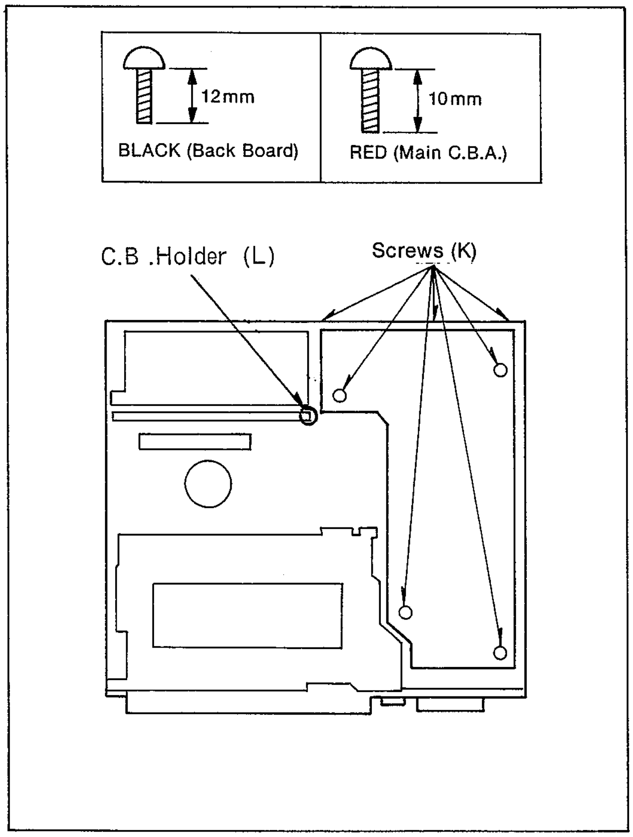

12mm
BLACK (Back Board)
10mm
RED (Main C.B.A.)
C.B .Holder (L)
Screws (K)

Fig. D8

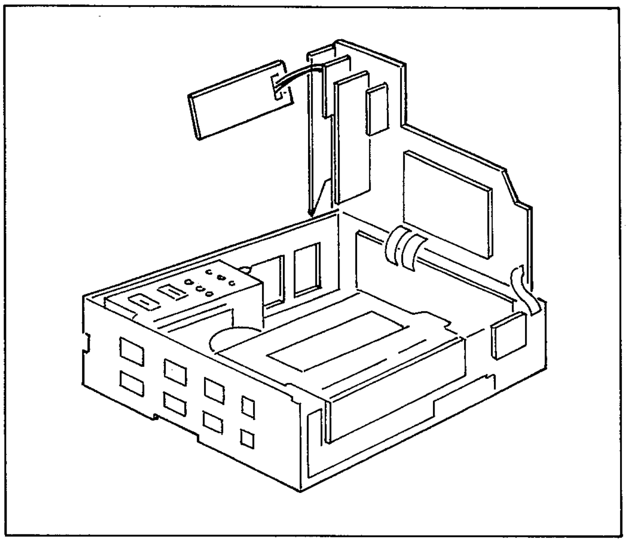


Fig. D9

8. Removal of Power Unit

   Remove the 5 screws (Z) and take it out from the frame.
   Remove the shield case then checking can be performed.

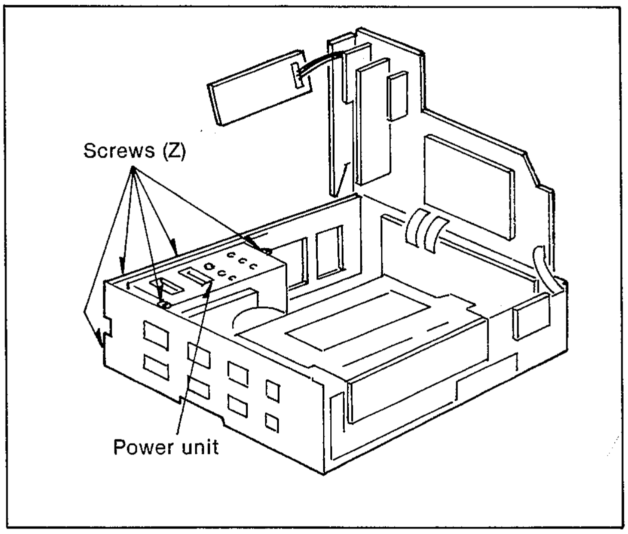

Screws (Z)
Power unit

Fig . D10

9. Remove of Cassette Compartment

   Remove 2 screws(M) and slide the cassette holder until appearing 2 screws(N) by turning(clockwise) the capstan rotor unit(located in the bottom side) and then remove 2 screws(N).
   Remove the flexible wire from connector P1503 mounted on Take-up photo Tr. C.B.A.,then carefully pull out the cassette compartment.

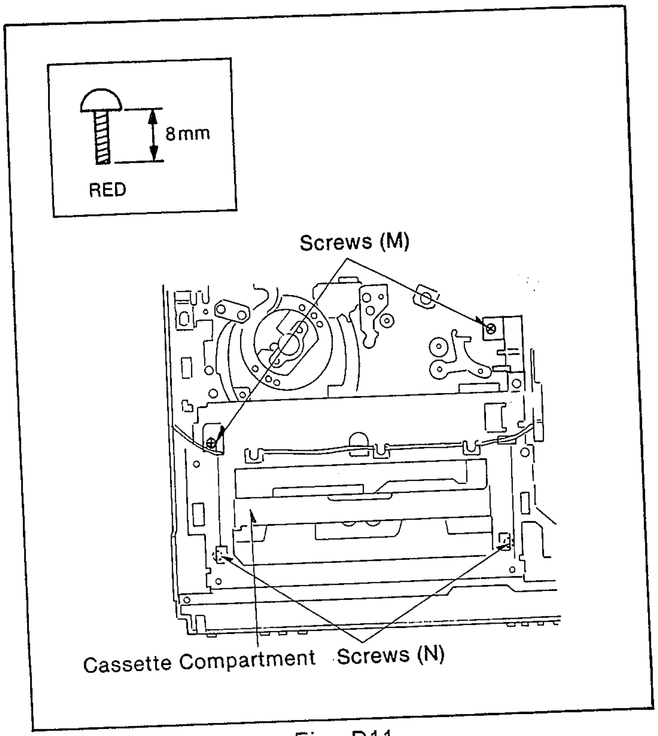

8mm
RED
Screws (M)
Cassette Compartment
Screws (N)

Fig. D11

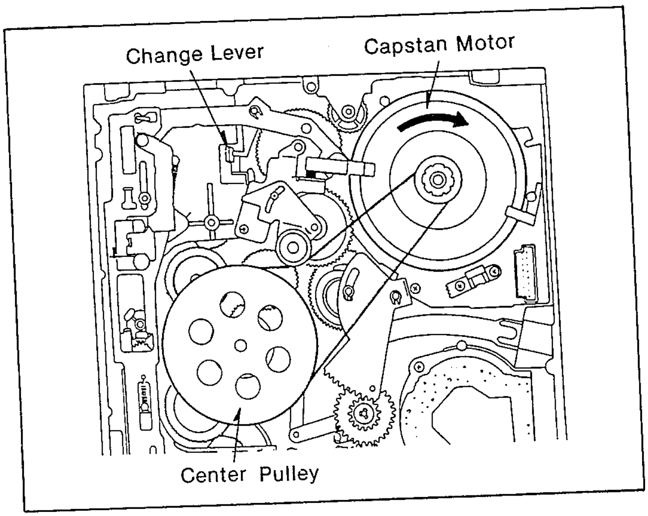

Change Lever
Capstan Motor
Center Pulley

Fig. D12

2-2-3. REINSTALLATION OF CASSETTE COMPARTMENT FROM STOP (FF/REW) POSITION

1. Set the mechanism condition to Stop (FF/REW) position by means of turning capstan motor (refer to 2–2–5.)
2. Remove the 2 screws (O) as shown in Fig.D13.

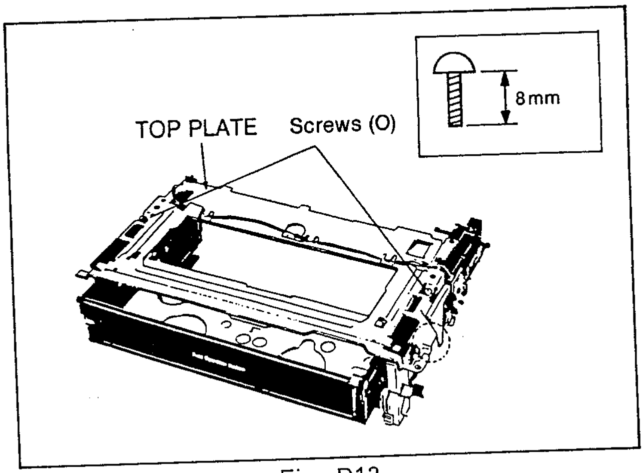

TOP PLATE
Screws (O)
8mm

Fig. D13

3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Fig.D14.

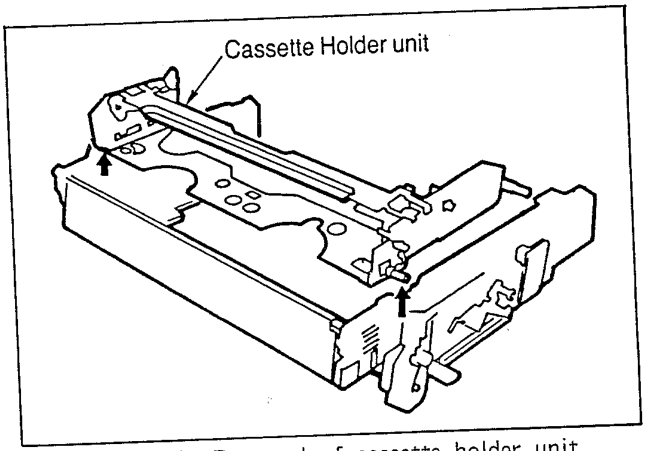

Cassette Holder unit

Fig. D14 Removal of cassette holder unit

5. Press the sub wiper arm (P) to direction indicated by arrow so that the sub wiper arm (P) comes to cassette down position completely as shown in Fig.D15. and keep it.

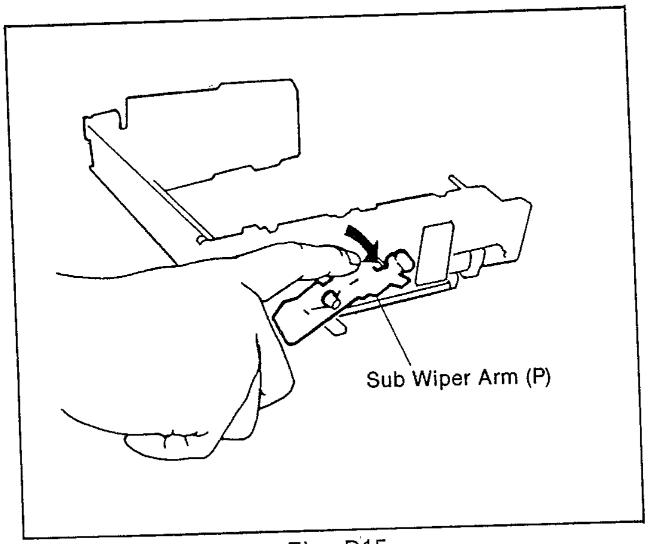

Sub Wiper Arm (P)

Fig. D15

6. Reinstall the cassette compartment (Without Cassette Holder) to chassis so that the first tip of Rack Gear A (1) comes to Marking slot of connection gear as shown in Fig.D16.

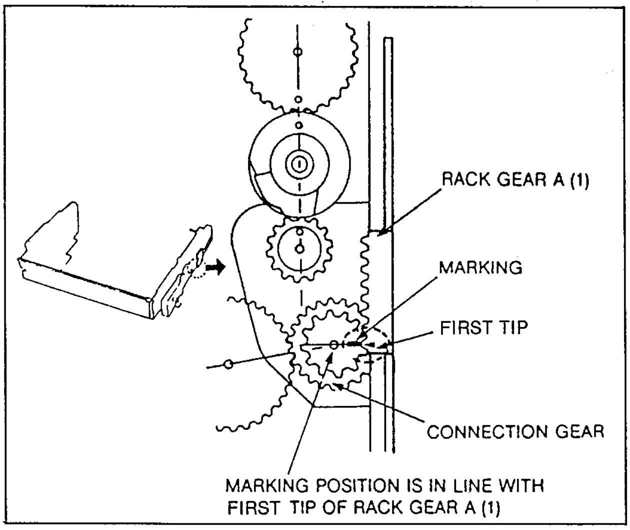

RACK GEAR A (1)
MARKING
FIRST TIP
CONNECTION GEAR
MARKING POSITION IS IN LINE WITH FIRST TIP OF RACK GEAR A (1)

Fig. D16

7. Tighten the 4 screws (Q) as shown in Fig.D17.

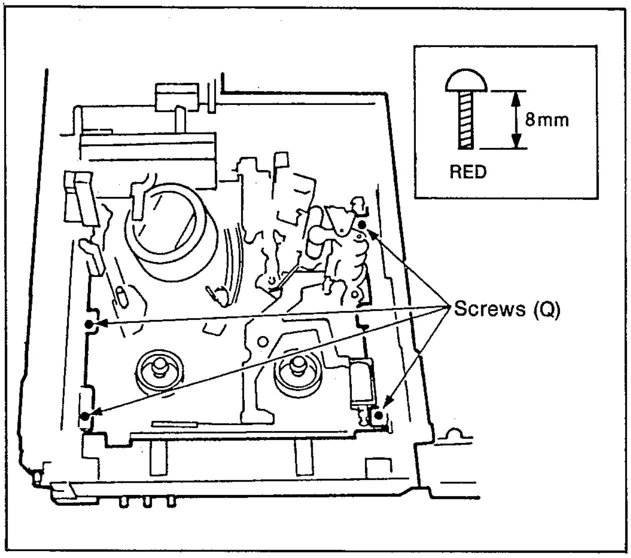

8mm
RED
Screws (Q)

Fig. D17

8. Press the change lever and turn the capstan motor counter clockwise until mechanism is placed to Eject position as shown in Fig.D18.
9. Reinstall the cassette holder unit as just the reverse way of item 4, Fig.D14.
10. Reinstall the top plate as just the reverse way of item 3, Fig.D13.

2-2-4. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

(1) Take out the Main AC.
(2) Release the Change Lever by pushing it to arrow mark direction as shown in Fig.D18.
(3) Turn the capstan motor to counter clockwise slowly until the Clutch Disk is locked. (Clutch Disk is locked once in one rotation)
(4) Release the Change Lever again when the Cluch Disk is locked.
(5) Repeat the (2) and (3) until cassette is ejected.

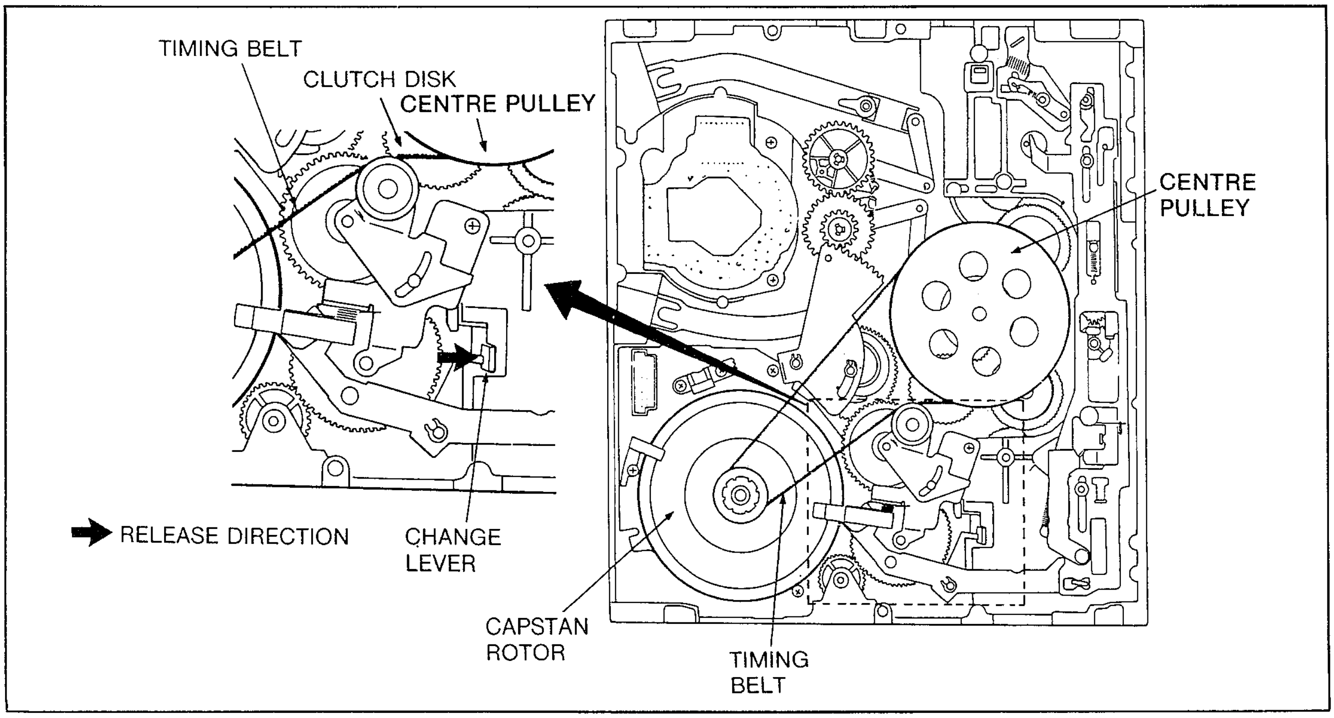

TIMING BELT
CLUTCH DISK
CENTRE PULLEY
RELEASE DIRECTION
CHANGE LEVER
CAPSTAN ROTOR
TIMING BELT
CENTRE PULLEY

Fig. D18

2-2-5. HOW TO SEE THE MOVEMENT OF MECHANISM WITHOUT CASSETTE COMPARTMENT

Since capstan motor works as loading motor and front loading motor, Phase relationship between cassette compartment and mechanism is important, so Playback and FF/REW can not be performed even just only taking out the cassette compartment, however, if you want to see the mechanical movement without cassette compartment, it is possible as follows.

1. Take out the Main AC.
2. Take out the 5 pin flexible cable from P1503 on the cassette compartment and remove the cassette compartment from chassis.
   Set the Mechanism to stop (FF/REW) mode as following items 3.,4.,5.,6.
3. Release the change lever by pussing it to arrow mark direction as shown in Fig.D18.
4. Turn the capstan motor to clockwise until the Clutch Disk is locked.
   (Clutch Disk is locked once in one rotation)
5. Release the change lever again when Clutch Disk is locked.
6. Repeat item 4 and 5 until mechanism come to stop (sub loading) position as shown in Fig.D19.
   (STOP position is same as FF/REW position, therfore, when you rotate the capstan motor in STOP position, supply or Take up reel table is rotated corresponding with direction of rotation)
7. Turn the power on.
8. Now, any operation can be performed without cassette compartment.

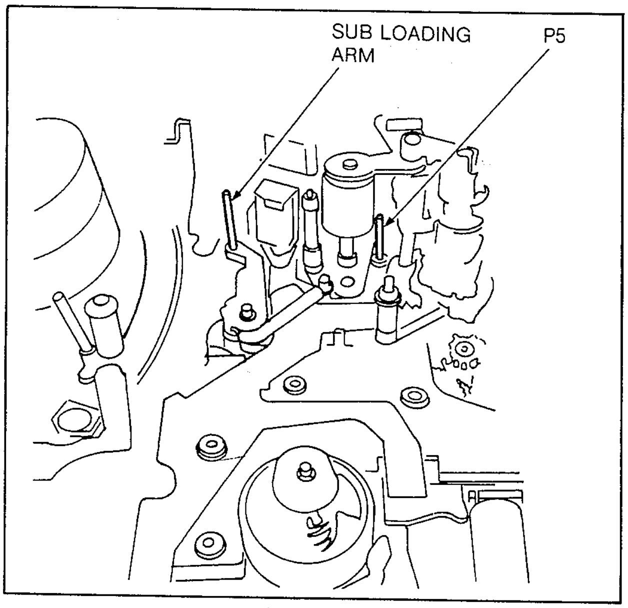


Fig. D19

Note:
1) Don't add the large torque to any gears not to break it.
2) When reinstalling the cassette compartment, refer to 2−2−3 Reinstallation of Cassette Compartment.
3) It is not possible to operate the mechanism from Eject position.

2-3 REPLACEMENT OF THE CYLINDER UNIT

2-3-1. REPLACEMENT OF THE D.D CYLINDER UNIT

Work with extreme care when removing or replacing the D.D. cylinder unit.
Do not touch the video head during servicing.

1. Remove the 2 screws (R) to take the Head Amp Pack Out.
2. Remove the 1 screw (S) to take the Earth Holder Unit Out.
3. Disconnect the 5P connector on the cylinder drive C.B A

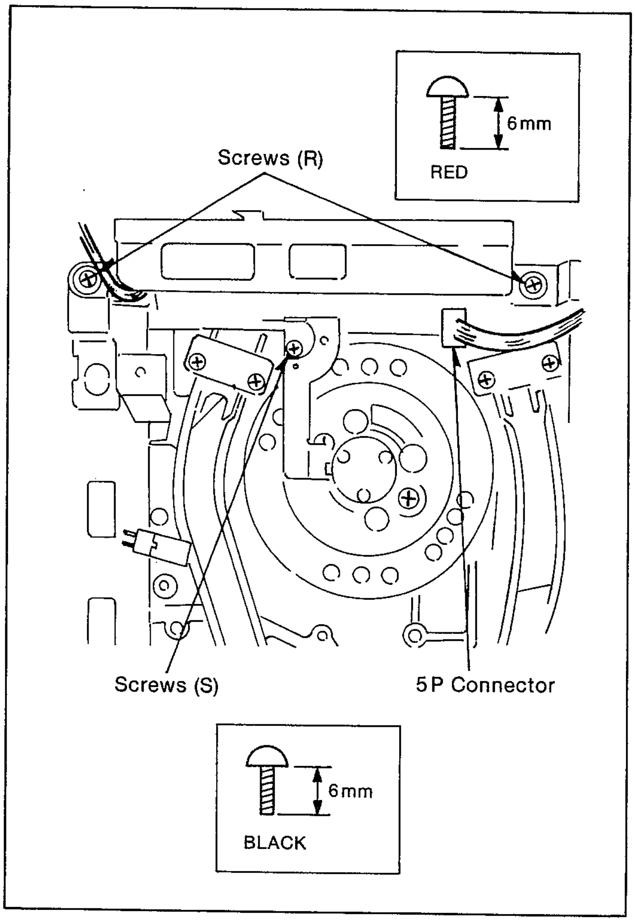


Fig. D20

4. Remove the 3 screws (T) to take the D.D. cylinder unit (with the cylinder drive C.B.A.) out.

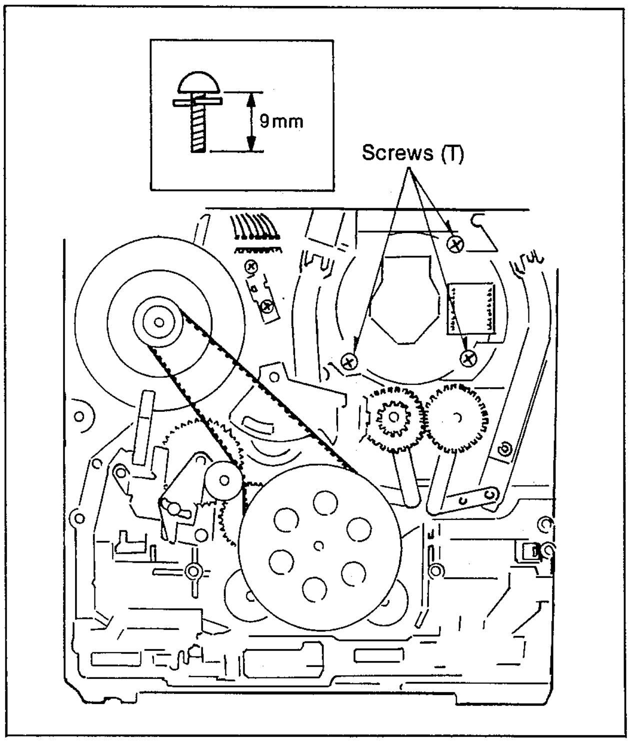


Fig. D21

Note:
Since there is very little clearance between the D.D. cylinder unit and the chassis, remove the D.D. cylinder unit gently and carefully.

5. Reinstall the new D.D. Cylinder Unit, tighten the 3 screws (T) and reinstall the Earth Holder Unit, tighten the 1 screw (S).
Then reconnect the Head Amp pack and 5P connector and tighten 2 screws (R).

Note:
(1) Gently rub the video head in direction of tape travel with Head cleaning stick.
(2) After replacement, confirm the performance.
If any further maintenance is required, perform "TAPE INTER-CHANGE ABILITY ADJUSTMENT".

2-3-2. REPLACEMENT OF THE CYLINDER DRIVE C.B.A.

1. Remove the D.D. cylinder unit referring the Item 2-3-1.
2. Place the D.D. cylinder unit upside down.
3. Unsolder the solderd portion (V) for shield case to take it out.
4. Unsolder the 18 soldered portions (U) indicated by an arrow wark (including 10 soldered portions inside of shield case).
5. Remove the 2 screws (W) to remove the cylinder drive C.B.A. unit.

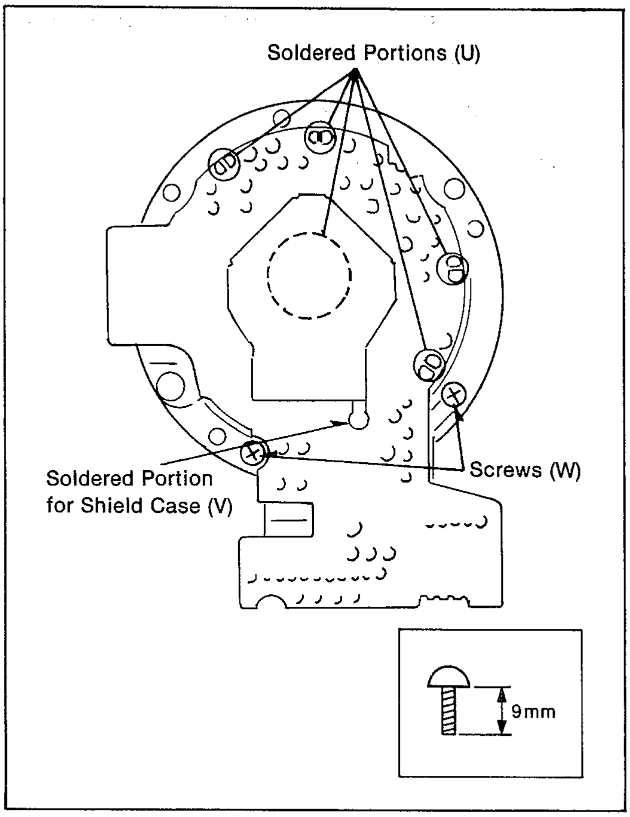


Fig. D22

6. Reinstalling is just reverse way of above procedures.

2-3-3. REPLACEMENT OF THE CYLINDER DRIVE IC

1. Remove the Cylinder Drive C.B.A. as item 2–3–2.
2. Remove the screw (X) to take the heat sink Plate out.
3. Unsolder the 18 soldered portions of the Cylinder Drive IC to take it out.
4. Reinstall the New IC with the care of Pins location.
5. Re–solder the 18 pins of the Cylinder Drive IC.
6. Reinstall the Cylinder Drive C.B.A. to the D.D.

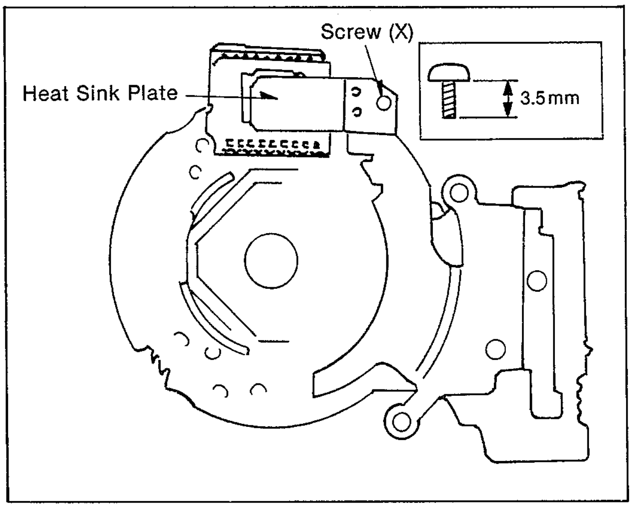


Fig. D23

2-3-4. REPLACEMENT OF THE UPPER CYLINDER UNIT

1. Remove two screws as shown below.
2. Unsolder 8 soldered portions indicated by arrows on the C. Board.
3. Remove the Upper Cylinder Unit by lifting it upward.

Note:
Soldered portion can be easily removed by using solder sucking wire, etc.

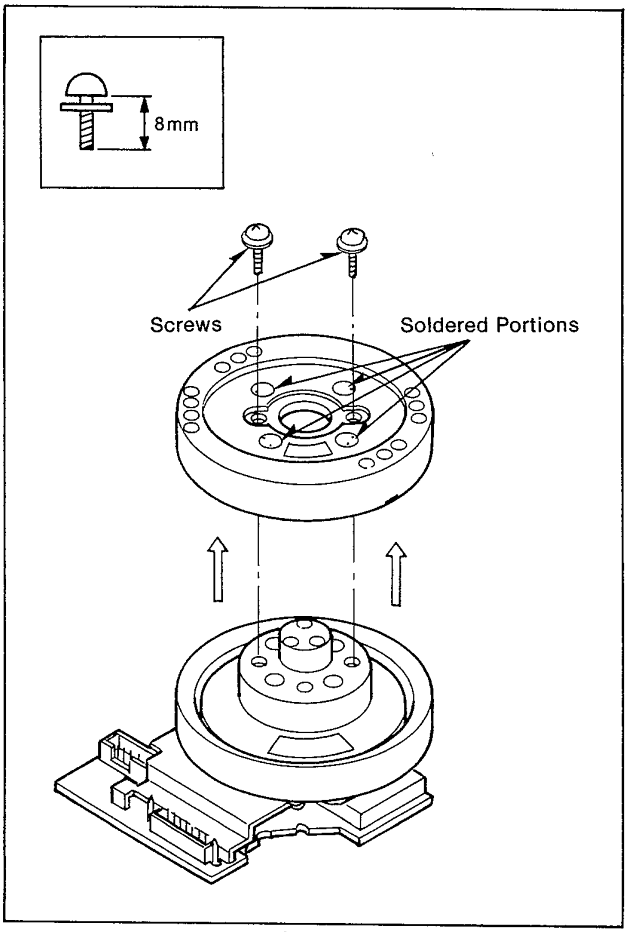

8mm
Screws
Soldered Portions

Fig. D24

4. The upper cylinder unit can be reinstalled by reversing the removal procedure, however, when the upper cylinder is reinstalling, be extremely carefull so that white portion of C. Board of the upper cylinder correctly matches the white portion of the bottom cylinder as shown below.

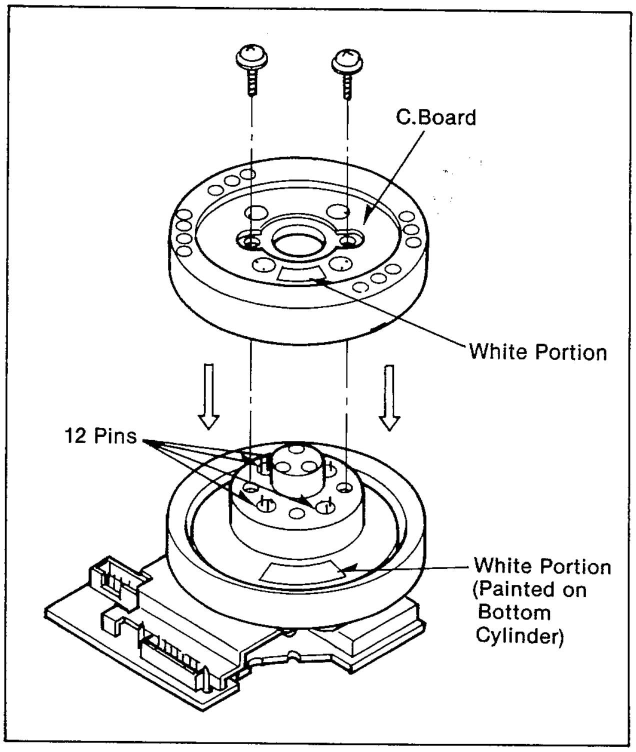

C.Board
White Portion
12 Pins
White Portion (Painted on Bottom Cylinder)

Fig. D25

Note:
1). If the Upper Cylinder Unit is reversely installed, no colour would appear when playing back a pre-recorded tape.
2). Do not loosen the 3 small screws on the top of the cylinder as shown below. If these 3 screws are loosend, Cylinder motor is broken and not restored.

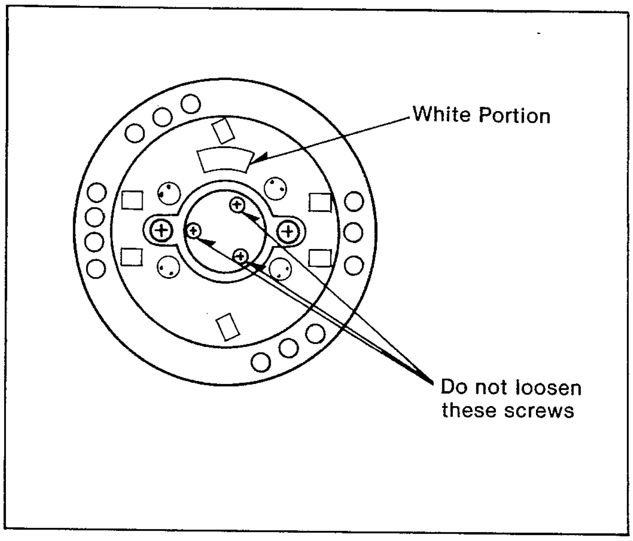

White Portion
Do not loosen these screws

Fig. D26

2-4. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrial adjustment procedures which may be required for electronic circuits of VHS Video Cassette Recorder NV-G500EM.

2-4-1. TEST EQUIPMENT

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001~50V
2. Dual-Trace Oscilloscope
   Voltage Range: 0.005~50V/div
   Frequency Range: 0~30MHz
   Probes: 10:1 or 1:1
3. Frequency Counter
   Frequency Range: 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range: 0~5MHz
5. Video Sweep Generator
   Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape (VFJ8125H3F: PAL)
   (VFM8080HMFPH: NTSC)

2-4-2. HOW TO READ THE ADJUSTMENT PROCEDURES

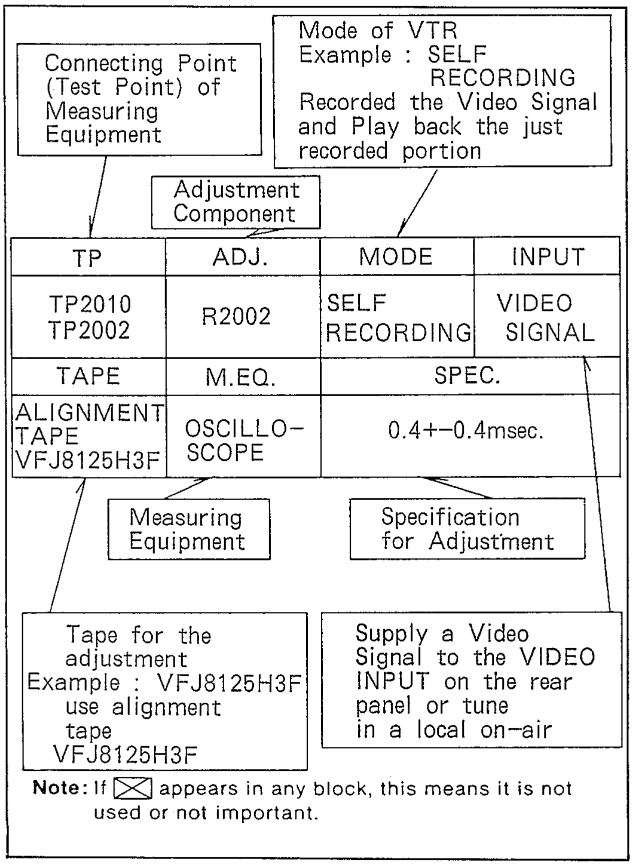

Connecting Point (Test Point) of Measuring Equipment
Mode of VTR
Example : SELF RECORDING
Recorded the Video Signal and Play back the just recorded portion
Adjustment Component
TP
ADJ.
MODE
INPUT
TP2010
TP2002
R2002
SELF RECORDING
VIDEO SIGNAL
TAPE
M.EQ.
SPEC.
ALIGNMENT TAPE VFJ8125H3F
OSCILLO-SCOPE
0.4+-0.4msec.
Measuring Equipment
Specification for Adjustment
Tape for the adjustment
Example : VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air
Note: If ☒ appears in any block, this means it is not used or not important.

Fig. E1

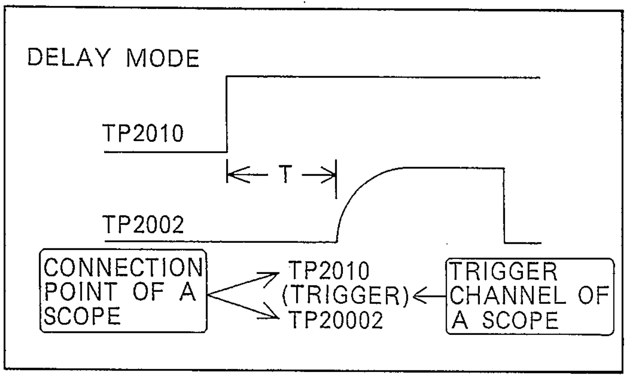

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP20002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

SERVO SECTION

2-4-3. PG SHIFTER ADJUSTMENT (PAL SP MODE)

TP	ADJ.	MODE	INPUT
TP3002 TP2001	VR2001P	PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFJ8125H3F)	OSCILLO-SCOPE	6.5±0.5H	

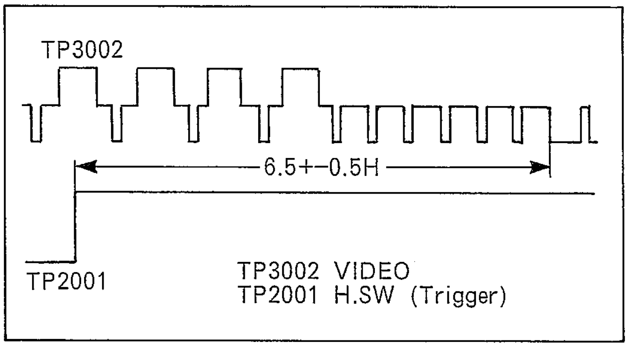

TP3002
6.5+-0.5H
TP2001
TP3002 VIDEO
TP2001 H.SW (Trigger)

Fig. E3

2-4-4. PG SHIFTER ADJUSTMENT (NTSC)

TP	ADJ.	MODE	INPUT
TP3002 TP2001	VR2001N	PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFM8080HMFPH	OSCILLO-SCOPE	6.5±0.5H	

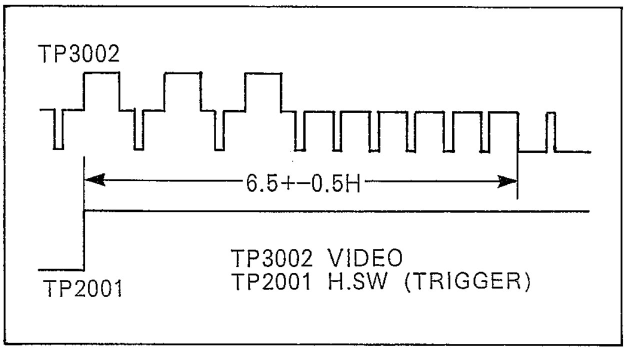

TP3002
6.5+-0.5H
TP2001
TP3002 VIDEO
TP2001 H.SW (TRIGGER)

Fig. E4

2-4-5. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR3502 (PAL SP)	SELF RECORDING	PAL VIDEO SIGNAL
	VR3503 (NTSC SP) VR3501 (NTSC SLP)		NTSC VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR		

1. Play back the just recorded portion (PAL SP, NTSC SP & NTSC SLP SIGNAL) and place the deck in STILL mode.
2. Adjust the VR3502 (for PAL SP) so that V-dancing does not appear on the TV monitor. (during PAL SP STILL mode).
   Adjust the VR3503 (for NTSC SP) so that V-dancing does not appear on the TV monitor (during NTSC SP STILL mode)
   Adjust the VR3501 (for NTSC SLP) so that V-dancing does not appear on the TV monitor (during NTSC SLP STILL mode)

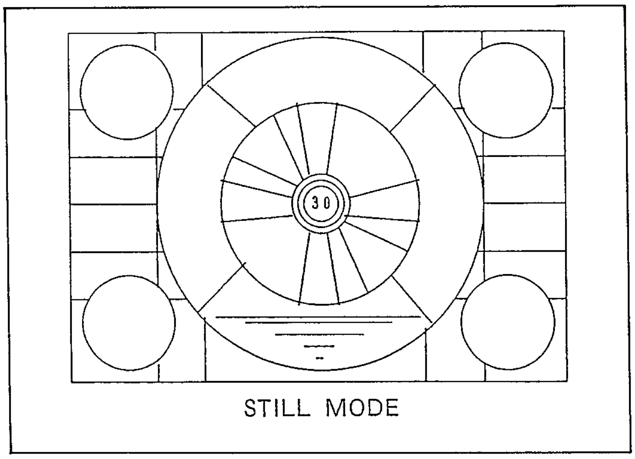


Fig. E5

2-4-6. SLOW TRACKING FIX ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR2011 (PAL SP)	SELF RECORDING	PAL VIDEO SIGNAL
	VR2020 (NTSC SP) VR2021 (NTSC SLP) VR2022 (NTSC LP)		NTSC VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR		

1. Record the PAL video signal and playback just recorded portion.
2. Place the deck in SLOW mode.
3. Press the tracking volume (+) and (−) bottons together in order to set the slow tracking fix position.
4. Adjust the VR2011 (PAL SP mode) so that noise disappear on TV screen.
5. By the same way, adjust the VR2020 (NTSC SP mode) and VR2021 (NTSC SLP mode) so that noise disappear on TV screen.
6. In the case of NTSC (LP) use pre-recorded tape (which was recorded by other NTSC VTR equipped with LP function), then by the same way, adjust the VR2022 so that noise disappear on TV screen.
7. After adjusting, comfirm that the position of tracking become intermediate portion between the point of noise appearance when tracking (+) botton is pressed and when tracking (−) botton is pressed.

2-4-7. SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	STILL	
TAPE	**M. EQ.**	**SPEC.**	
PAL SP TAPE	FREQUENCY COUNTER	453 Hz±15 Hz	

1. Connect the jumper wire between TP2026 and GND.
2. Play back the PAL SP TAPE and place the STILL mode.
3. Connect the frequency counter to TP2015
4. Adjust the VR2013 so that frequency is 453Hz+−15Hz.

2-4-8. AUTO TRACKING GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC3002-6	VR3003	STOP	CW SIGNAL 4 MHz, 200 mVp-p at TP3001
TAPE	**M. EQ.**	**SPEC.**	
	D.V.M	3.0±0.1 V	

1. Set the SWEEP GENERATOR to CW mode.
2. Adjust CW frequency to 4MHz, 200mVp-p.
3. Supply the 4MHz, 200mVp-p to TP3001.
4. Adjust VR3003 so that the voltage at IC3002-6 become 3.0+−0.1V.

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-4-9. CHROMA REC CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP503 TP504	VR8001 (PAL) VR8010 (3.58 NTSC) VR8003 (SECAM)	RECORDING	PAL/ 3.58 NTSC/ SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	32±3mVp-p (PAL) 44±3mVp-p (3.58 NTSC) 32±3mVp-p (SECAM)	

1. Supply the PAL colour bar signal to VTR.
2. Set the system switch for "AUTO" position.
3. Connect the osilloscope to TP503 (HOT) and TP504 (GND).
4. Connect the jumper wire between P502−2 and GND (on Head Amp C.B.A.).
5. Place the VTR to recording mode.
6. Adjust the VR8001(PAL) so that chroma level (A) become 32+−3mVp−p.

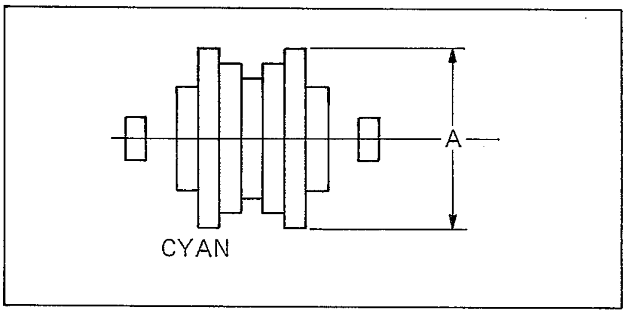


Fig. E6

7. Supply the 3.58 NTSC colour bar signal to VTR.
8. By the same way, adjust the VR8010 so that chroma level (A) become 44mV+−3mVp−p.
9. Supply the SECAM colour bar signal to VTR.
10. Set the system SW for "SECAM" mode.
11. By the same way, adjust the VR8003 so that chroma level (B) become 32mV+−3mVp−p.

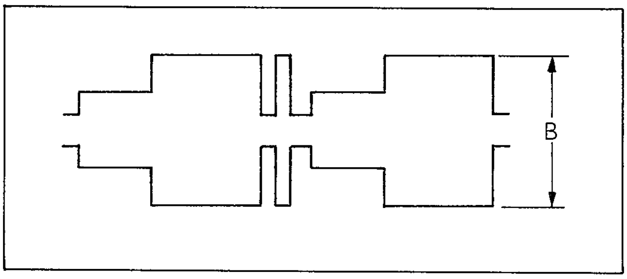


Fig. E7

2-4-10. VIDEO REC CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP503 (HOT) TP504 (GND)	VR501 (PAL)	RECORDING	VIDEO SIGNAL (PAL)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	130mV±5mVp-p	

1. Supply the PAL colour bar signal to VTR.
2. Set the system switch for AUTO position.
3. Place the VTR in recording mode.
4. Connect the oscilloscope to TP503 (HOT) and TP504 (GND).
5. Adjust the VR501 so that video level becomes 130mV+−5mVp−p.

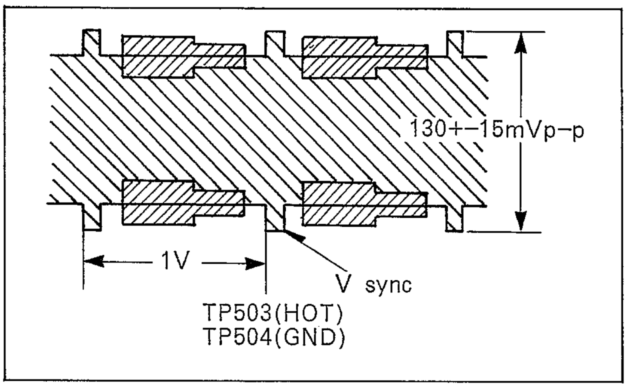
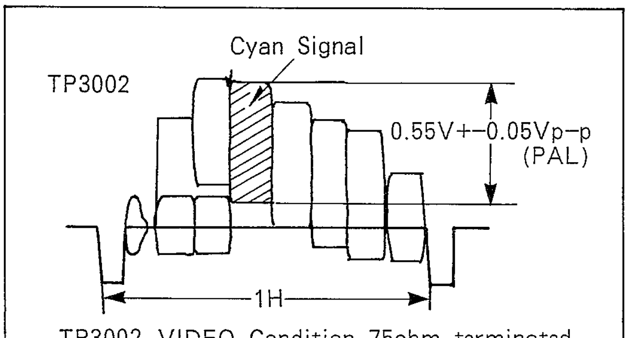


Fig. E8

2-4-11. PLAY BACK CHROMA LEVEL

TP	ADJ.	MODE	INPUT
VIDEO OUT (TP3002)	VR8008 (PAL) VR8004 (SECAM)	SELF RECORDING	PAL/ SECAM COLOUR BAR SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.55V±0.05Vp-p (PAL) 0.42V±0.05Vp-p (SECAM)	

1. Set the system switch to "AUTO" position.
2. Record the PAL colour bar signal.
3. Play back just recorded portion.
4. Adjust the VR8008 so that cyan level become 0.55V+−0.05Vp−p.



TP3002 VIDEO Condition 75ohm terminated

Fig. E9

5. Set the system switch to "SECAM" position.
6. Record the SECAM colour bar signal.
7. Play back just recorded portion.
8. Adjust the VR8004 so that magenta level become 0.42V+-0.05Vp-p.

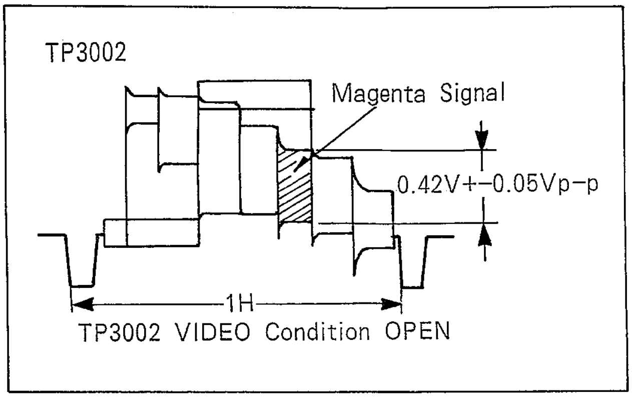

TP3002
Magenta Signal
0.42V+-0.05Vp-p
1H
TP3002 VIDEO Condition OPEN

Fig. E10

2-4-12. LINE NOISE CANCELLER ADJUSTMENT

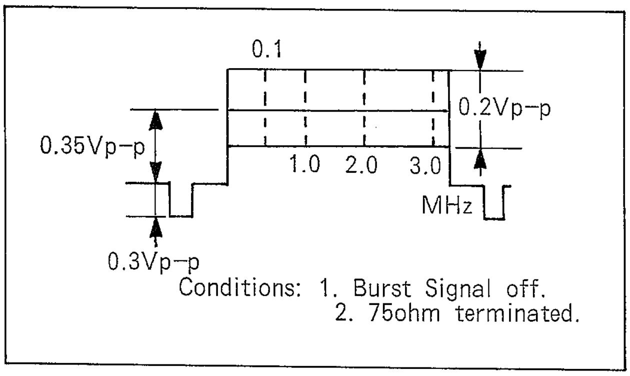
TP	ADJ.	MODE	INPUT
C322 (+) SIDE	VR301	SELF RECORDING	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	WAVEFORM IS MINIMIZED	

1. Record the PAL colour bar signal.
2. Connect the oscilloscope to C322 (+) side.
3. Playback the just recorded portion.
4. Adjust the VR301 so that the waveform is minimized.

2-4-13. VIDEO FREQUENCY RESPONCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT (TP3002)	VR3012 (SP) VR3013 (LP)	SELF RECORDING	PAL VIDEO SWEEP
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE		

1. Set the sweep generator output as shown below.


0.1
0.2Vp-p
0.35Vp-p
1.0 2.0 3.0
MHz
0.3Vp-p

Conditions: 1. Burst Signal off.
2. 75ohm terminated.

Fig. E11

2. Set the system switch to "AUTO" and Edit switch to "OFF".
3. Record the above signal with SP mode.
4. Play back the just recorded portion with the Edit switch "OFF" position.
5. Adjust the VR3012 so that the level at 2.0MHz become 0+-1 dB comparing with level at 0dB.

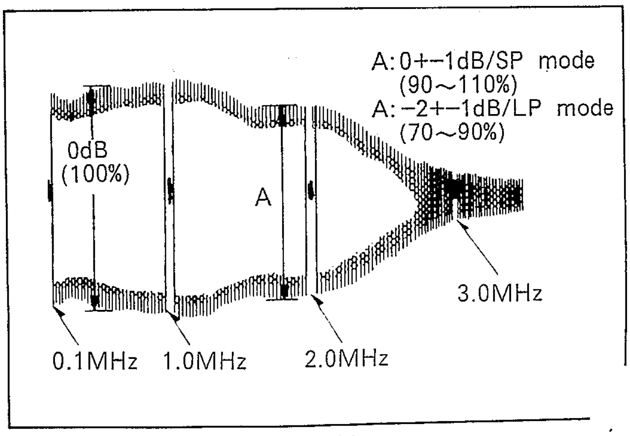

A:0+-1dB/SP mode
(90~110%)
A:-2+-1dB/LP mode
(70~90%)
0dB
(100%)
A
3.0MHz
0.1MHz
1.0MHz
2.0MHz

Fig. E12

6. Record the above sweep signal with LP mod
7. Play back the just recorded portion with switch "OFF" position.
8. Adjust the VR3013 so that the level at 2.0M become -2+-1dB comparing with level at 0dB.

2-4-14. SECAM KILLER FREQUENCY AND GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC8502-11	T8501	RECORDING	SECAM SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MAXIMUM	

1. Supply SECAM colour bar sigal to VTR.
2. Place the VTR to recording.
3. Connect the oscilloscope to IC8502-11.
4. Adjust the T8501 so that level of point A is maximized.

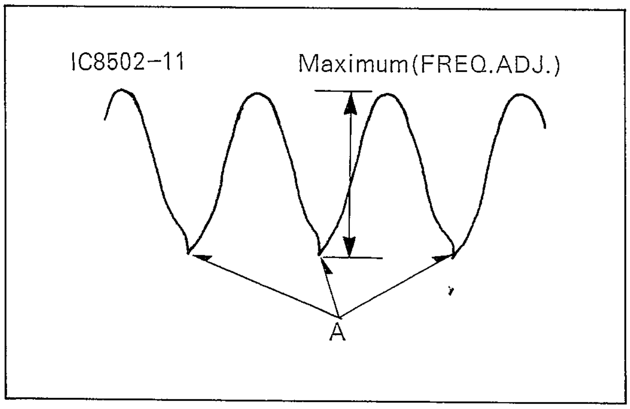

IC8502-11
Maximum(FREQ.ADJ.)
A

Fig. E13

2-4-15. SECAM BLANKING PULSE PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002 TP8013	VR8005	RECORDING	SECAM SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	1.2±0.1μsec.	

1. Supply SECAM signal to VTR.
2. Place the VTR to Recording mode.
3. Connect the oscilloscope to TP3002 and TP8013.
4. Adjust VR8005 so that the width "T" becomes 1.2+−0.1usec. as shown below.

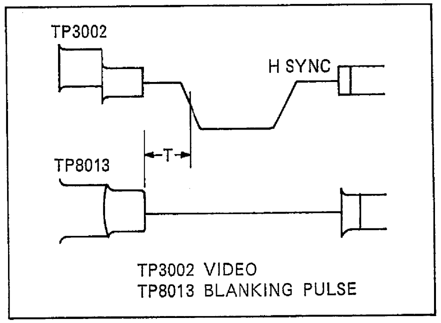

TP3002
H SYNC
TP8013
T
TP3002 VIDEO
TP8013 BLANKING PULSE

Fig. E14

2-4-16. SECAM KILLER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC851-⑪	T851	RECORDING	SECAM VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE		

1. Adjust T851 so that points "A" becomes maximum on the waveform.

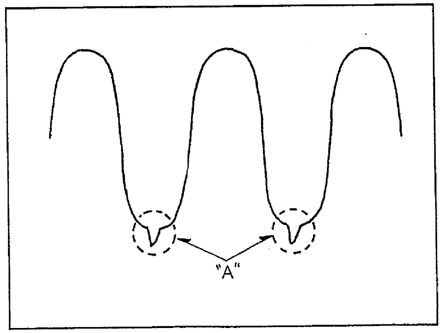


Fig. E15

2-4-17. 0.32H SKEW COMPENSATION DELAY SIDE Y LEVEL

TP	ADJ.	MODE	INPUT
TP3002	VR3801	CUE	NTSC MONO SCOPE PATERN
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE		

1. Supply NTSC monoscope patern to VTR.
2. Record the NTSC monoscope patern with SP mode.
3. Connect the oscilloscope to TP3002.
4. Play back just recorded portion and place the VTR to "CUE" mode.
5. Adjust the VR3801 so that the level of delay side become equal to normal side (so that waveform become flat).

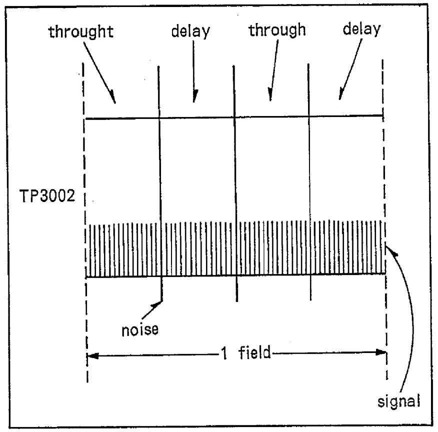

throught
delay
through
delay
TP3002
noise
1 field
signal

Fig. E16

2-4-18. 0.32H SKEW COMPENSATION DELAY SIDE CHROMA LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3802	STILL	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	LEVEL CHANGE IS MINIMIZED	

1. Supply NTSC Colour bar to VTR with SP mode.
2. Play back just recorded portion with "4.43 NTSC" mode and place the VTR to STILL mode.
3. Connect the oscilloscope to TP3002.
4. Adjust the VR3802 so that level change of chroma signal is minimized.

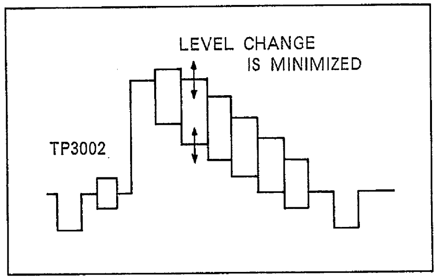

LEVEL CHANGE IS MINIMIZED
TP3002

Fig. E17

2-4-19. HD PULSE ADJUSTMENT

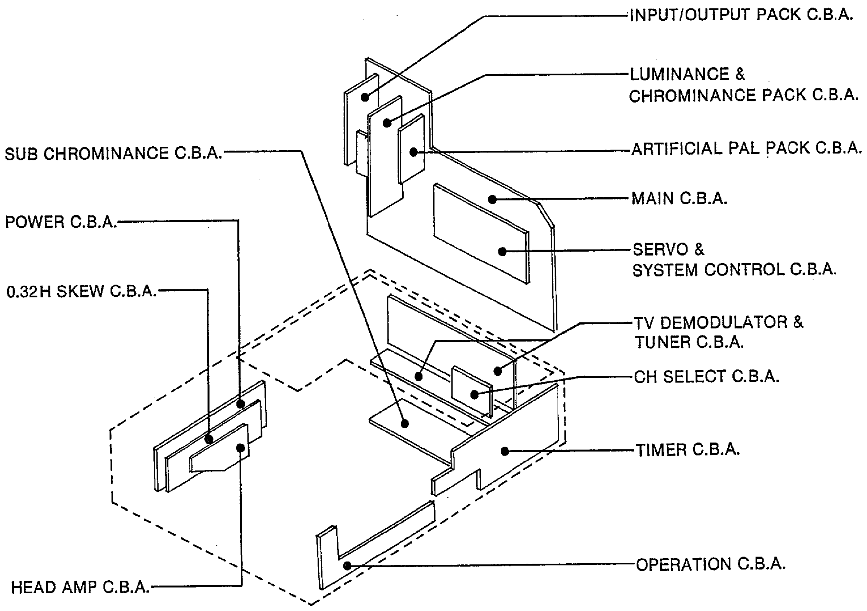
TP	ADJ.	MODE	INPUT
P3901-2	VR3901	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	f=15,735±25Hz	

AUDIO SECTION

2-4-20. AUDIO BIAS CURRENT ADJUSTMENT

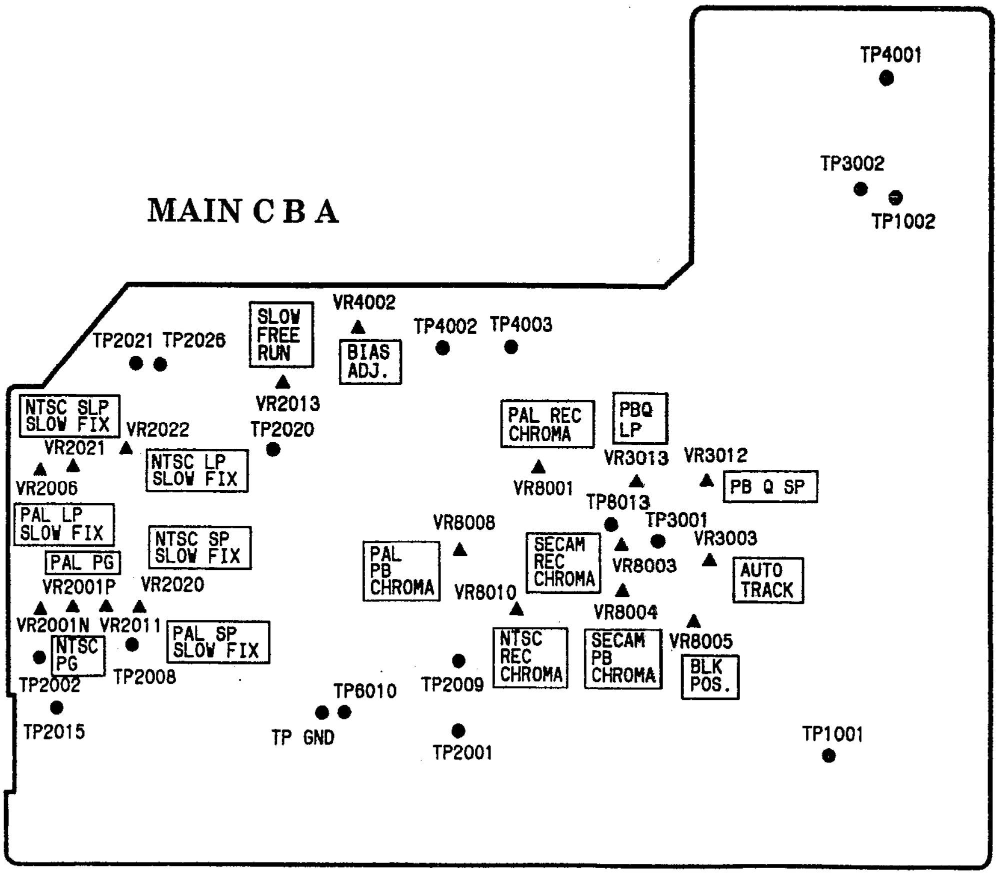
TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M	2.2±0.1mVrms	

CIRCUIT BOARD LAYOUT

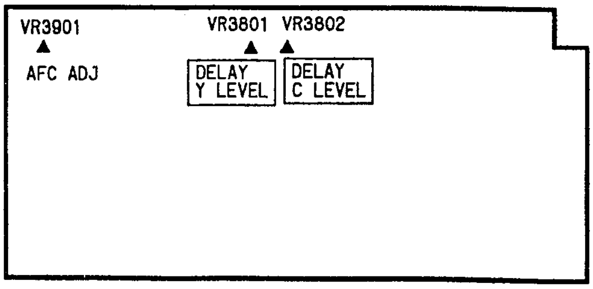

INPUT/OUTPUT PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
SUB CHROMINANCE C.B.A.
ARTIFICIAL PAL PACK C.B.A.
MAIN C.B.A.
POWER C.B.A.
SERVO & SYSTEM CONTROL C.B.A.
0.32H SKEW C.B.A.
TV DEMODULATOR & TUNER C.B.A.
CH SELECT C.B.A.
TIMER C.B.A.
OPERATION C.B.A.
HEAD AMP C.B.A.

LOCATION OF TEST POINTS & CONTROLS —1—

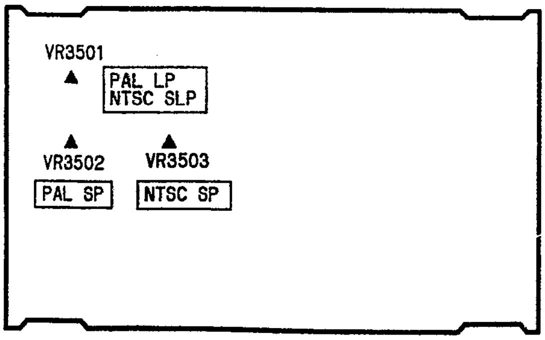
MAIN C B A


TP4001
TP3002
TP1002
SLOW FREE RUN
VR4002
BIAS ADJ.
TP4002
TP4003
TP2021
TP2026
VR2013
TP2020
NTSC SLP SLOW FIX
VR2022
VR2021
VR2006
NTSC LP SLOW FIX
PAL REC CHROMA
PBQ LP
VR3013
VR3012
PB Q SP
VR8001
TP8013
TP3001
VR3003
PAL LP SLOW FIX
NTSC SP SLOW FIX
VR8008
PAL PB CHROMA
SECAM REC CHROMA
VR8003
AUTO TRACK
PAL PG
VR2001P
VR2020
VR8010
VR8004
VR2001N
VR2011
PAL SP SLOW FIX
NTSC PG
NTSC REC CHROMA
SECAM PB CHROMA
VR8005
BLK POS.
TP2002
TP2008
TP8010
TP2009
TP2015
TP GND
TP2001
TP1001

0.32H SKEW C.B.A.

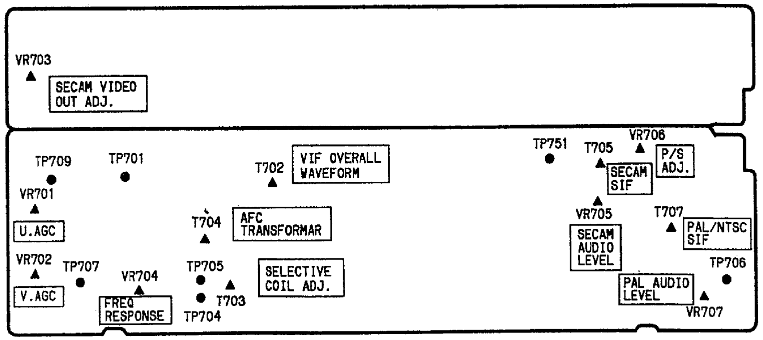

VR3901
AFC ADJ
VR3801
VR3802
DELAY Y LEVEL
DELAY C LEVEL

INPUT/OUTPUT PACK C B A

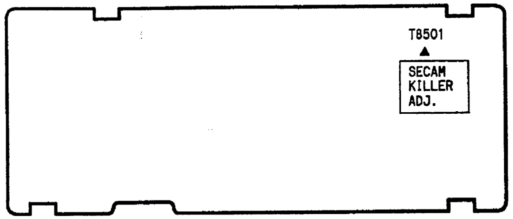

VR3501
PAL LP NTSC SLP
VR3502
VR3503
PAL SP
NTSC SP

LOCATION OF TEST POINTS & CONTROLS —2—

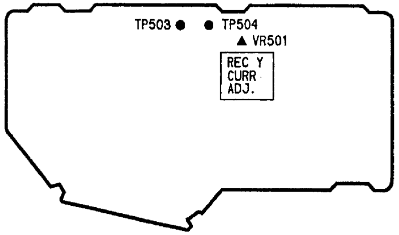
TV DEMODULATOR & TUNER C B A


VR703
SECAM VIDEO OUT ADJ.
TP709
TP701
VR701
U.AGC
T702
VIF OVERALL WAVEFORM
T704
AFC TRANSFORMAR
VR702
TP707
VR704
V.AGC
FREQ RESPONSE
TP705
T703
TP704
SELECTIVE COIL ADJ.
TP751
T705
VR706
P/S ADJ.
SECAM SIF
VR705
SECAM AUDIO LEVEL
T707
PAL/NTSC SIF
TP706
PAL AUDIO LEVEL
VR707

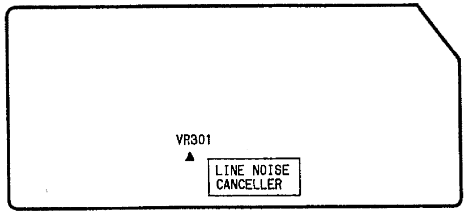
SUB CHROMINANCE C.B.A.


T8501
SECAM KILLER ADJ.

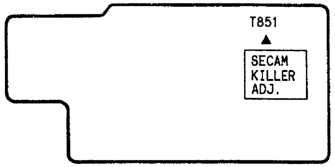
HEAD AMP C.B.A.


TP503
TP504
VR501
REC Y CURR ADJ.

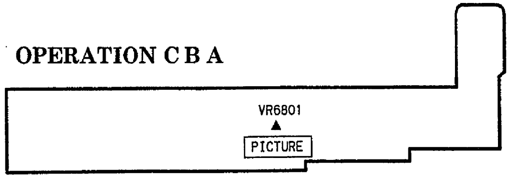
LUMINANCE & CHROMINANCE PACK C B A


VR301
LINE NOISE CANCELLER

SECAM PACK C B A


T851
SECAM KILLER ADJ.

OPERATION C B A


VR6801
PICTURE

TV DEMODULATOR SECTION

2-4-21. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. VIF SWEEP GENERATOR with the Trap Adjuster
2. SIF SWEEP GENERATOR
3. CW OSCILLATOR
4. MONITOR SCOPE
5. OSCILLOSCOPE
6. DIGITAL VOLT METER

Note:
To make this adjustment, Please set the TV demodulator (VIF) & (SIF) and tuner pack as shown below.

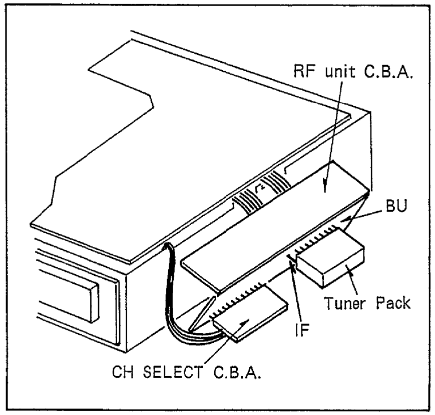

RF unit C.B.A.
BU
Tuner Pack
IF
CH SELECT C.B.A.

Fig. E18

1. First, remove RF unit C.B.A. from frame. Then, remove the Tuner pack and CH select C.B.A. from RF unit C.B.A. Reinstall the Tuner pack and CH select C.B.A. on the foil side not to mis–install the pin's order and solder the soldering portions of Tuner pack and CH select C.B.A. When reinstalling, be extremly careful not to make any short circuit.

2-4-22. SELECTIVE COIL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T703		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP/ MONITOR SCOPE	A=38.9MHz	

1. Set the SYSTEM SELECTOR (located on rear Pannel) of VTR for "PAL/SECAM B, G" position.
2. Press PRESET/FINE/NORMAL Button and set the BAND SW of VTR for VHF high position (III). Push the tuning botton (+) or (−) so that voltage at BT terminal becomes 15+−1V.
3. Connect the jumper wire between CH select pack −9 and 13 in order to cut the AFC.
4. Connect the jumper wire between AGC terminal of tuner pack and GND.
5. Connect the VIF SWEEP GENERATOR output to TP701 through Flter A and connect the MONITOR SCOPE to TP707 through Filter B.
6. Adjust the VIF SWEEP GENERATOR output so that output waveform on MONITOR SCOPE become 0.3Vp−p. After output become 0.3Vp−p, increase VIF SWEEP GENERATOR output by 20dB.

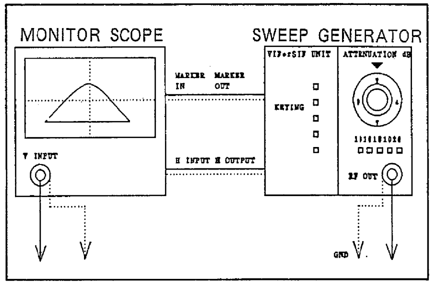

MONITOR SCOPE
SWEEP GENERATOR
V INPUT
GND

Fig. E19 Connection of Measuring Equipment

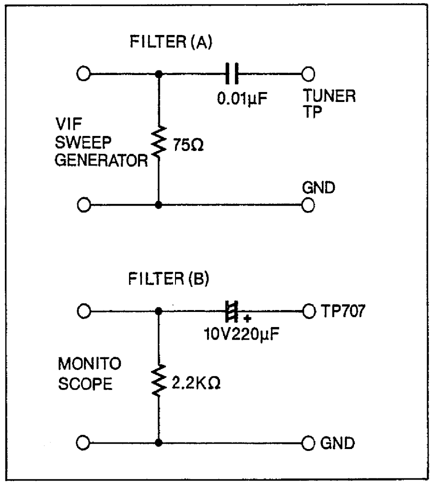

FILTER (A)
0.01μF
TUNER TP
VIF SWEEP GENERATOR
75Ω
GND
FILTER (B)
TP707
10V220μF
MONITO SCOPE
2.2KΩ
GND

Fig. E20

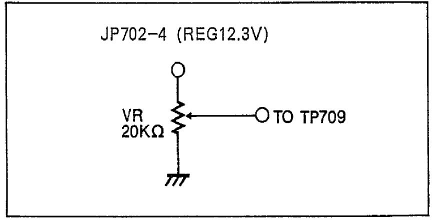

JP702-4 (REG12.3V)
VR 20KΩ
TO TP709

Fig. E21 Adjustment JIG (C)

7. Connect the Adjustment JIG (C) to TP709 and Adjust JIG (C) so that output waveform on MONITOR SCOP become 0.3Vp-p.
8. Adjust T703 so that peak of waveform become 38.9MHz.

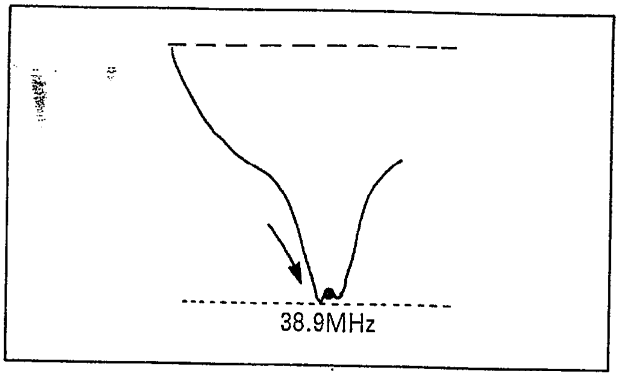


Fig. E22 Selective Adjustment

2-4-23. VIF OVERALL WAVEFORM ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T702		VIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	VIF SWEEP MONITOR SCOPE	SHOWN BELOW	

1. Set the SYSTEM SELECTOR (located on rear pannel) for "NTSC" mode.
2. Push PRESET/FINE/NORMAL button. Set the BAND SW for VHF high (III) position.
3. Connect the jumper wire between CH select pack -9 and 13 in order to cut the AFC.
4. Push the tuning button (+) or (−) so that voltage at BT terminal of tuner pack become 15+−1V.
5. Connect the jumper wire between AGC terminal of tuner and GND.
6. Connect 100ohm resistor between TP704 and TP705.
7. Connect VIF SWEEP to Tuner TP and connect the MONITOR SCOPE to TP707.

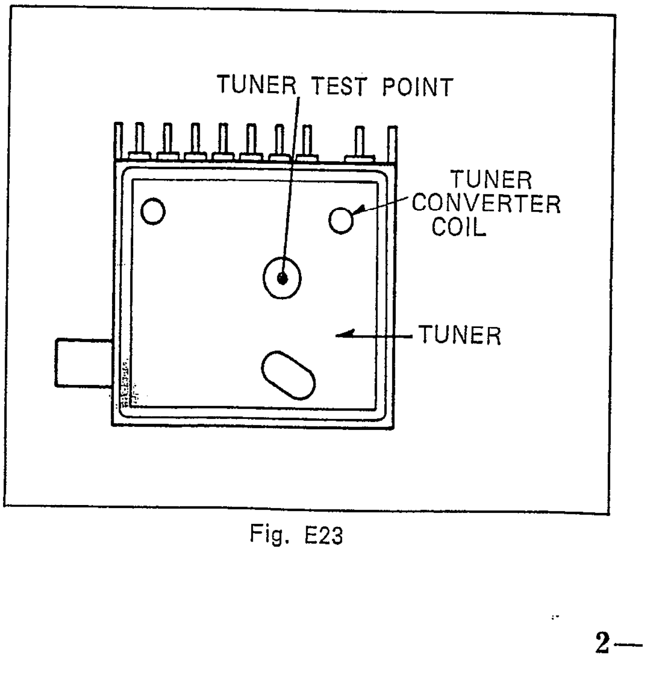


Fig. E23

8. Adjust the VIF SWEEP OUT so that output become 0.3Vp-p and then, increase VIF SWEEP by 20dB.
9. Connect Adjustment JIG (C) to TP709 and adjust JIG (C) so that output become 0.3Vp-p.
10. Set the system selecter (located on real pannel) for "NTSC" mode.
11. Adjust TUNER CONVERTER COIL (Fig. E23) so that fp (38.9M) become 35% comparing with 0 3V (100%).

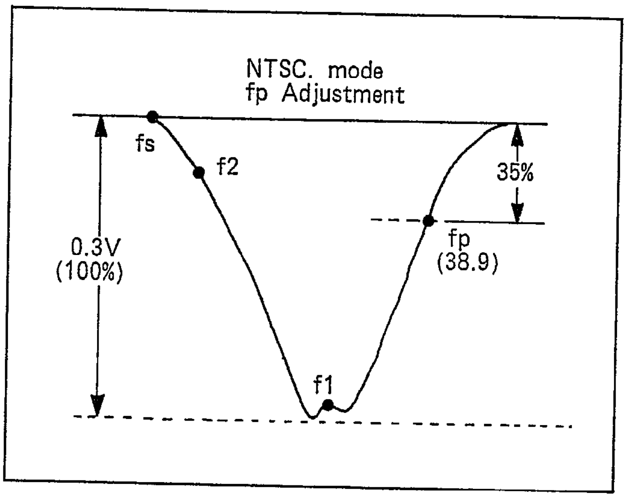


Fig. E24

12 Increase VIF SWEEP output by 16dB, then, adjust TP702 so that fs (34.47MHz) become 35%.

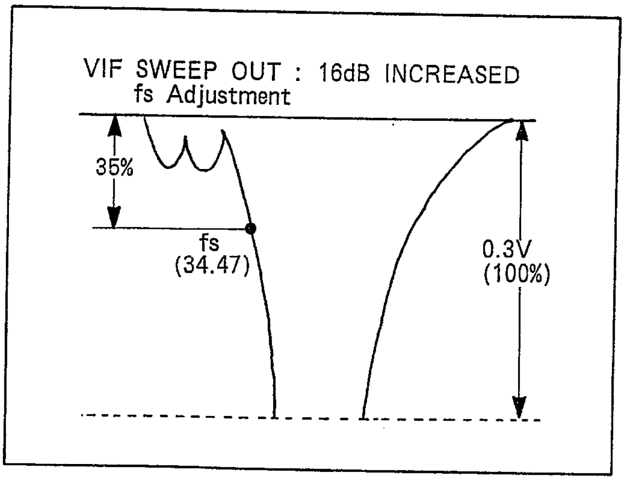


Fig. E25

13 Set the system sw (located on rear panel) of VTR and decrease VIF SWEEP output by 16dB.
14. Adjust the JIG (C) so that output become 0.3Vp-p.
15. Adjust TUNER CONVERTER COIL so that waveform become as shown in Fig. E26.

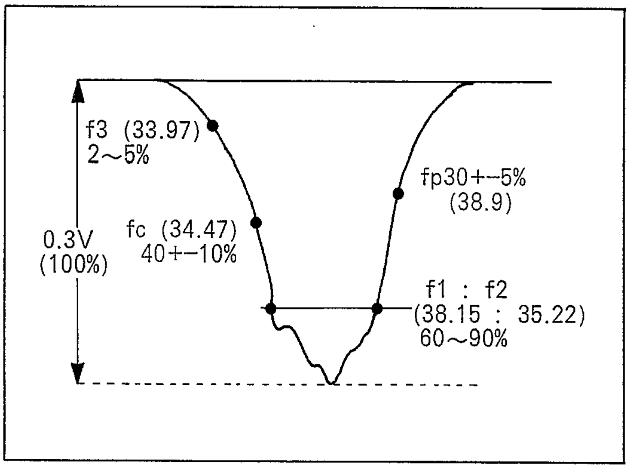


Fig. E26

2-4-24. SECAM SIF ADJUSTMENT

TP	ADJ.	MODE	INPUT
J701-3 (47kΩ TERMI-NATED)	T705		VIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	MONITOR SCOPE	SHOWN BELOW	

1. Set the SYSTEM SELECTOR (located on rear pannel) for "SECAM L" mode.
2. Set the BAND SW for VHF high (III) position.
3. Connect the jumper wire between CH select pack −9 and 13 to cut AFC.
4. Push the tuning button (+) or (−) so that BT voltage of tuner become 15+−1V.
5. Connect the jumper wire between AGC terminal of tuner and GND.
6. Connect the MONITOR SCOPE to JP701−3 (J701−3 must be terminated with 47Kohm resistor).

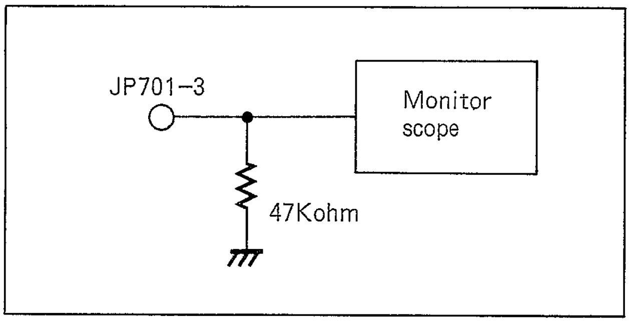


Fig. E27

7. Adjust the VIF SWEEP so that output become 16+−4mVp−p.
8. Connect the VIF SWEEP to Tuner TP.
9. Connect the Adjustment Jig(C) to TP751, Adjust Jig (C) so that output waveform on Monitor Sweep become 0.1Vp−p.
10. Adjust T705 so that 32.4MHz marker become peak and maximam.

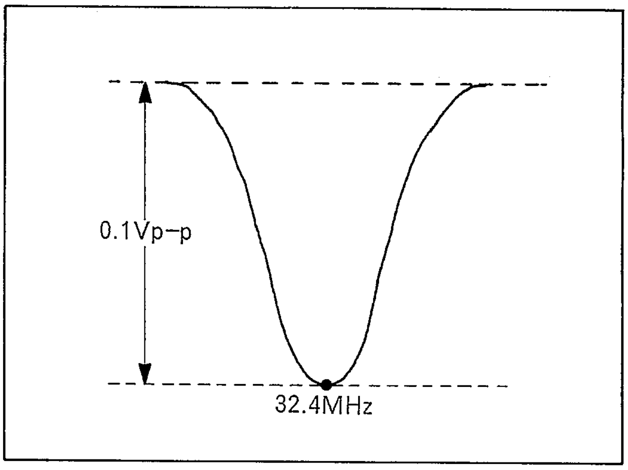


Fig. E28

2-4-25. PAL · NTSC SIF ADJUSTMENT

TP	ADJ.	MODE	INPUT
JP701-3	T707		SIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	MONITOR SCOPE	SHOWN BELOW	

1. Set the system selector (located on rear pannel) for PAL B mode.
2. Set the BAND SW for VHF high (III) position.
3. Connect the jumper wire between CH select pack −9 and 13 to cut AFC.
4. Push the tuning button (+) or (−) so that BT voltage of tuner become 15+−1V.
5. Set the SIF frequency of SIF SWEEP to 5.5MHz.
6. Connect the SIF SWEEP to TP706 and MONITOR SCOPE to JP701−3 with JP701−3 (Fig. E27).
7. Adjust SIF SWEEP output to 250mVrms.
8. Adjust T707 so that trap signal is minimized and amplitude is maximized.

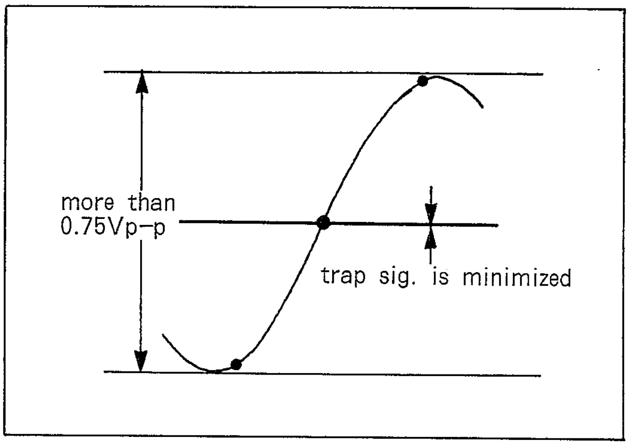


Fig. E29

2-4-26. AFC TRANSFORMAR ADJUSTMENT

TP	ADJ.	MODE	INPUT
AFC TERMINAL OF TUNER	T704		CW OSC 38.9 MHz, 1.0 Vp-p
TAPE	**M. EQ.**	**SPEC.**	
	V.T.V.M	AFC OFF VOLTAGE ±0.3V	

1. Set the system selector (located on rear pannel) for "PAL. B" mode.
2. Set the BAND SW for VHF high (III) position.
3. Push the tuning button (+) or (−) button so that BT voltage of tuner become 15+−1V.
4. Connect the jumper wire between CH select pack −9 and 13 to set AFC off.
5. Read the voltage at AFC terminal of tuner.
6. Connect the jumper wire between CH select pack −9 and 1.
7. Adjust T704 so that voltage at AFC terminal of tuner, become AFC off +−0.3V.

2-4-27. SECAM VIDEO OUT ADJUSTMENT

TP	ADJ.	MODE	INPUT
JP701-1	VR703		SECAM RF (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.2 Vp-p	

1. Set the system selector (located on rear pannel) for "SECAM L".
2. Connect the SECAM RF GENERATOR to RF IN and set the generator as follows:

CH	:	F7 CH (SECAM)
Patern	:	Colour bar
Video Modulation	:	95%
OUTPUT Electric Field	:	75dB

3. Tune the CHF7.
4. Adjust the VR703 so that video level become 1.0+−0.2Vp−p.

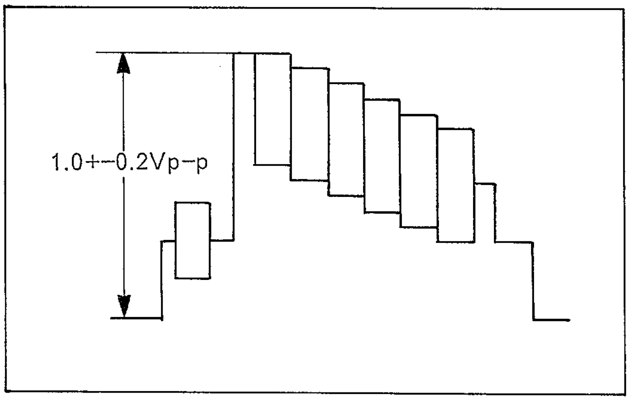


Fig. E30

Note:
Test point of Video output (JP701−1) must be 75ohm terminated.

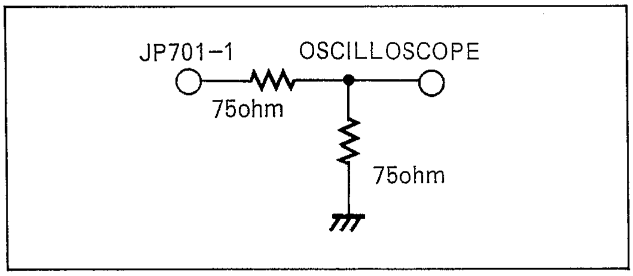


Fig. E31

2-4-28. SECAM AUDIO LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
JP701-3	VR705		SECAM RF
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	170±10mVp-p	

1. Set the system switch (located on rear pannel) for "SECAM L".
2. Set the SECAM RF GENERATOR as follows:

Audio MOD	:	400Hz 30% MOD/AM
Video MOD	:	95%
Output Electric Field	:	75dB

4. Adjust the VR705 so that voltage at JP701−3 is 170+−10mVp−p.

Note:
JP701−3 must be 470ohm terminated. (like Fig. E27)

2-4-29. PAL AUDIO LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
JP701-3	VR707		PAL RF
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	120±10mVp-p	

1. Set the System selector (located on rear pannel) for "PAL B".
2. Set the PAL RF GENERATOR as follows:

Audio MOD	:	400Hz 30% MOD/FM
Video MOD	:	87.5%
Output Electric Field	:	75dB

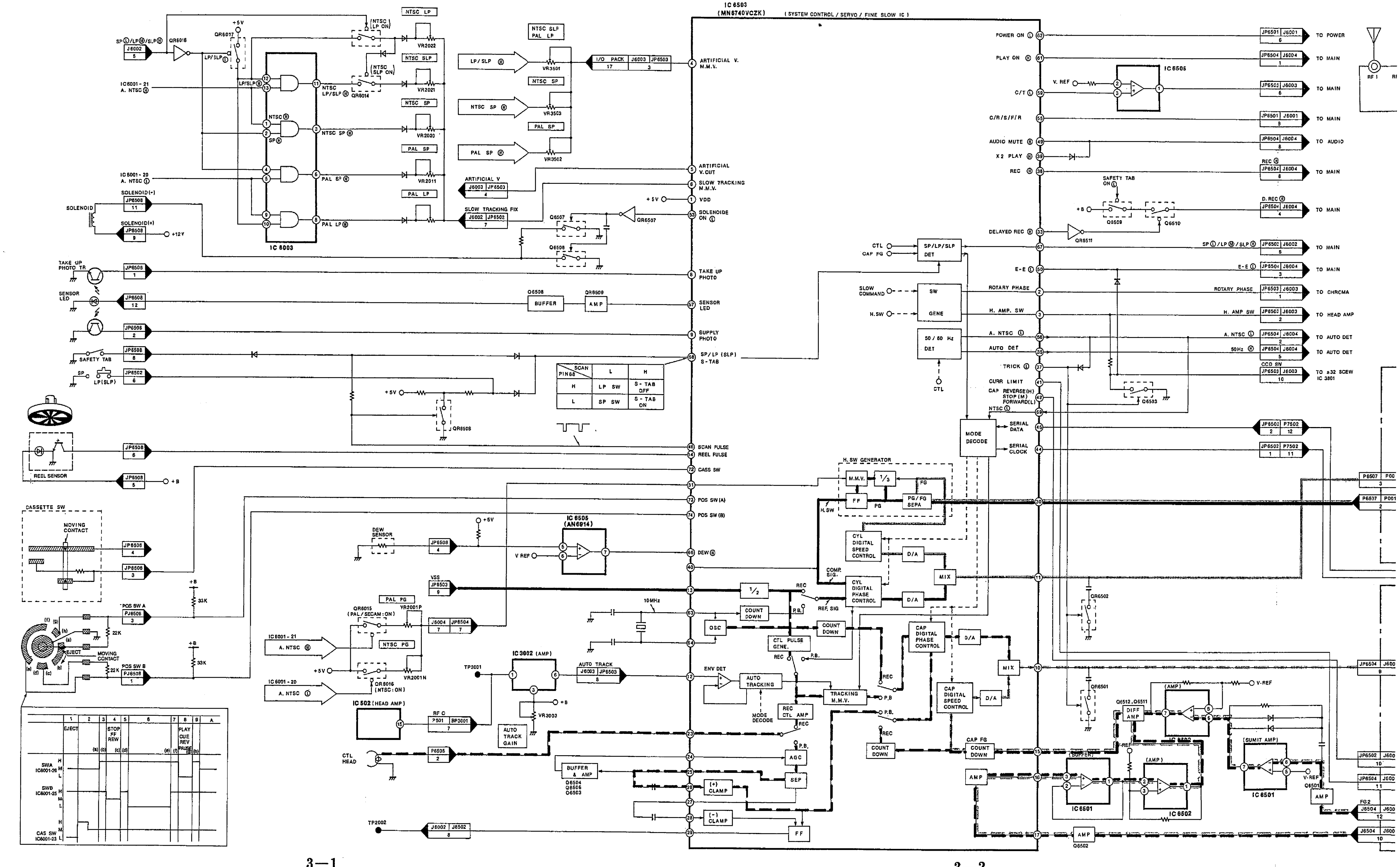
3. Connect the PAL RF GENERATOR to RF IN.
4. Adjust the VR707 so that voltage at JP701−3 become 120+−10mVp−p.

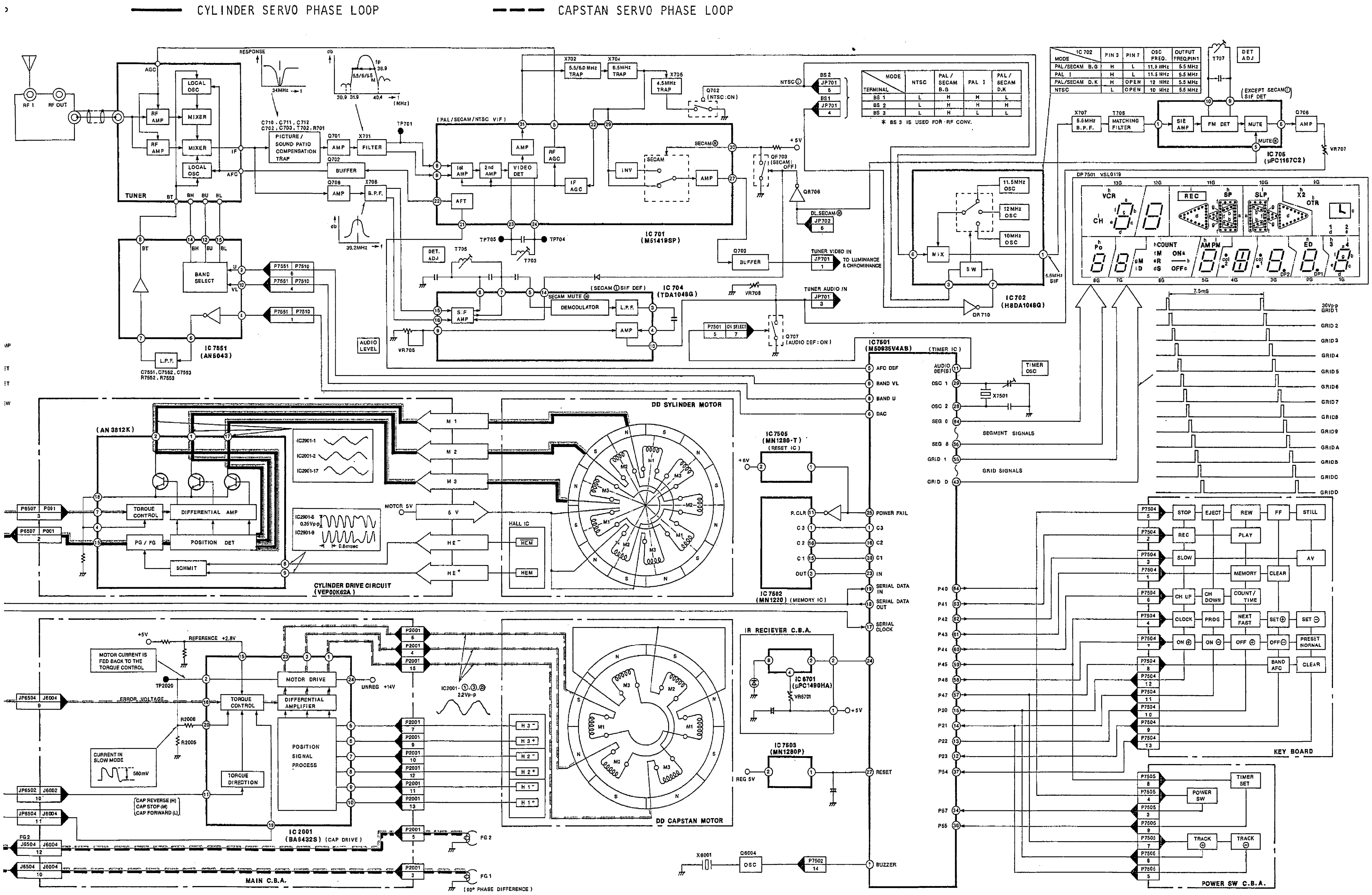
Note:
JP701−3 must be 47ohm terminated (like Fig. E27)

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS
3-1. SYSTEM CONTROL, SERVO & TIMER BLOCK DIAGRAM

CYLINDER SERVO SPEED LOOP

CAPSTAN SERVO SPEED LOOP

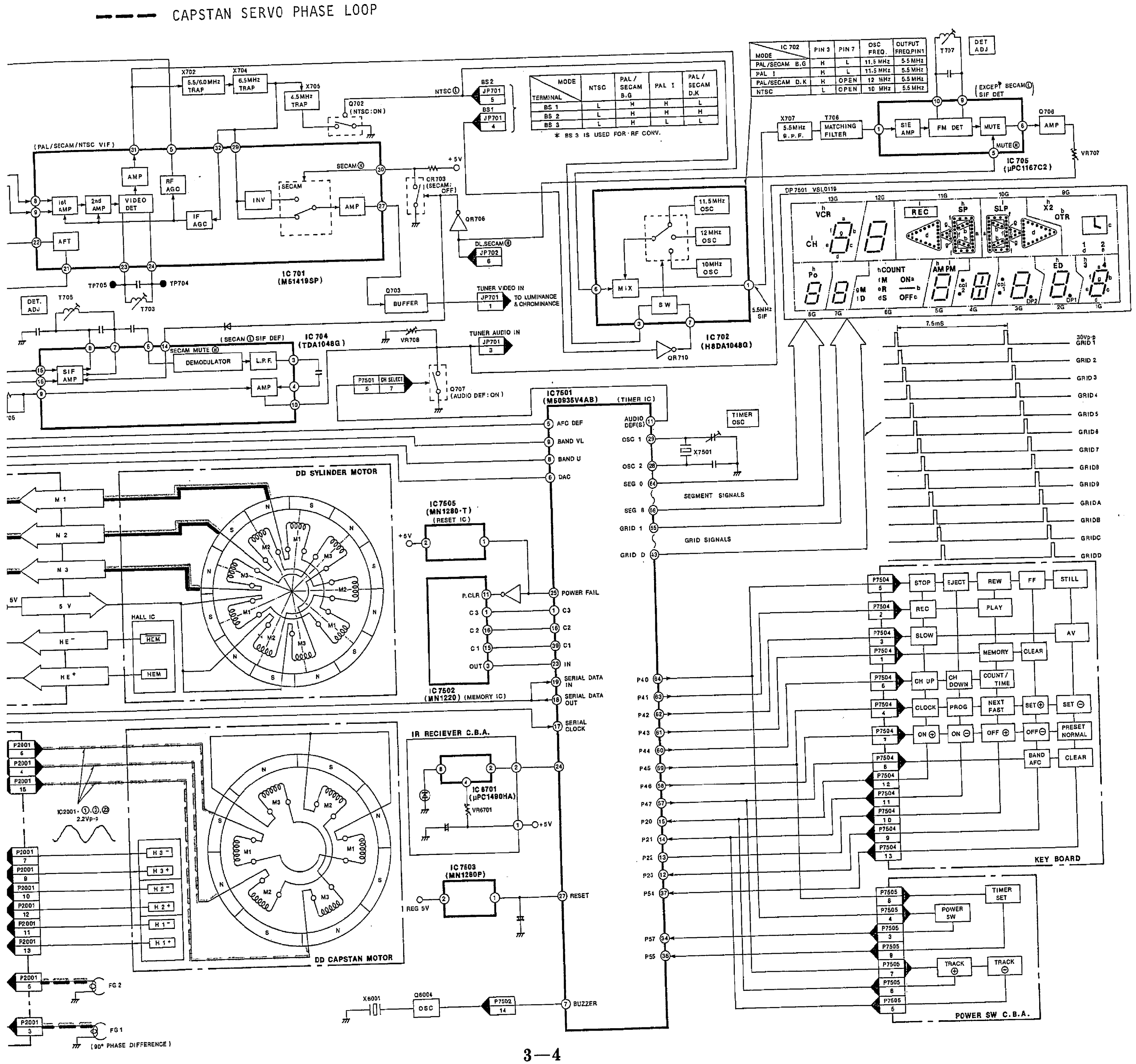

IC 6503
(MN6740VCZK)
(SYSTEM CONTROL / SERVO / FINE SLOW IC)
IC 6003
IC 6505
IC 6505 (AN6914)
IC 3002 (AMP)
IC 502 (HEAD AMP)
IC 6501
IC 6502
QR6016
QR6017
QR6014
QR6015
QR6016
QR6507
QR6508
QR6511
Q6507
Q6508
Q6509
Q6510
Q6593
Q6502
Q6504
Q6506
Q6503
VR2022
VR2021
VR2020
VR2011
VR3501
VR3503
VR3502
VR2001P
VR2001N
VR3003
NTSC LP
NTSC SLP
NTSC SP
PAL SP
PAL LP
PAL PG
NTSC PG
LP/SLP
NTSC SP
PAL SP
I/O PACK 17
ARTIFICIAL V. M.M.V.
ARTIFICIAL V.CUT
SLOW TRACKING M.M.V.
VDD
SOLENOIDE ON
TAKE UP PHOTO
SENSOR LED
SUPPLY PHOTO
SP/LP (SLP) S-TAB
SCAN PULSE
REEL PULSE
CASS SW
POS SW (A)
POS SW (B)
DEW
SOLENOID
TAKE UP PHOTO TR
SENSOR LED
SAFETY TAB
SP
LP(SLP)
REEL SENSOR
CASSETTE SW
MOVING CONTACT
EJECT
POS SW A
POS SW B
DEW SENSOR
V REF
BUFFER
AMP
SCAN PIN56
L
H
LP SW
SP SW
S-TAB OFF
S-TAB ON
ARTIFICIAL V
SLOW TRACKING FIX
CTL HEAD
TP2002
TP3001
AUTO TRACK
AUTO TRACK GAIN
RF C
10MHz
OSC
COUNT DOWN
CTL PULSE GENE.
ENV DET
AUTO TRACKING
TRACKING M.M.V.
MODE DECODE
REC CTL AMP
AGC
SEP
(+) CLAMP
(-) CLAMP
FF
BUFFER & AMP
1/2
REF. SIG
COMP. SIG.
H.SW GENERATOR
M.M.V.
1/3
FG
PG
PG/FG SEPA
CYL DIGITAL SPEED CONTROL
CYL DIGITAL PHASE CONTROL
CAP DIGITAL PHASE CONTROL
CAP DIGITAL SPEED CONTROL
D/A
MIX
CAP FG
SP/LP/SLP DET
SLOW COMMAND
H.SW
SW GENE
50 / 60 Hz DET
CTL
CAP FG
MODE DECODE
POWER ON
PLAY ON
C/T
C/R/S/F/R
AUDIO MUTE
X2 PLAY
REC
DELAYED REC
E-E
ROTARY PHASE
H. AMP. SW
A. NTSC
AUTO DET
TRICK
CURR LIMIT
CAP REVERSE(H) STOP(M) FORWARD(L)
NTSC
SERIAL DATA
SERIAL CLOCK
SAFETY TAB ON
D. REC
CCD SW
TO POWER
TO MAIN
TO AUDIO
TO CHROMA
TO HEAD AMP
TO AUTO DET
TO a32 SCEW IC 3801
(AMP)
(SUMIT AMP)
(BUFFER)
DIFF AMP
V-REF
RF 1
EJECT
STOP FF REW
PLAY CUE REV PAUSE
SWA IC6001-26
SWB IC6001-25
CAS SW IC6001-23

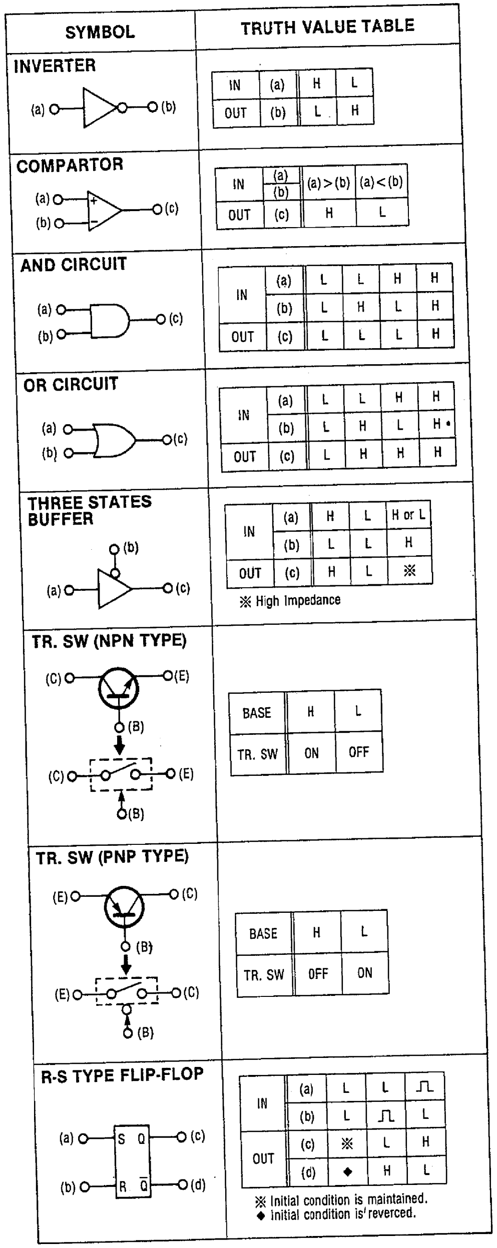

CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP
RF 1
RF OUT
AGC
LOCAL OSC
RF AMP
MIXER
IF
AFC
TUNER
BT
BH
BU
BL
RESPONSE
34MHz
C710, C711, C712, C702, C703, T702, R701
PICTURE / SOUND RATIO COMPENSATION TRAP
Q701 AMP
X701 FILTER
Q702 BUFFER
Q708 AMP
X708 B.P.F.
39.2MHz
TP701
(PAL/SECAM/NTSC VIF)
1st AMP
2nd AMP
VIDEO DET
RF AGC
IF AGC
AFT
INV
SECAM
AMP
IC 701 (M51419SP)
TP705
TP704
T703
T705
DET. ADJ
X702 5.5/6.0 MHz TRAP
X704 6.5MHz TRAP
X705 4.5MHz TRAP
Q702 (NTSC:ON)
NTSC
SECAM
+5V
QF703 (SECAM: OFF)
QR706
DL.SECAM
JP701
JP702
BS 2
BS 1
Q703 BUFFER
TUNER VIDEO IN
TO LUMINANCE & CHROMINANCE
TUNER AUDIO IN
VR708
(SECAM SIF DEF)
IC 704 (TDA1048G)
SECAM MUTE
S.IF AMP
DEMODULATOR
L.P.F.
AMP
AUDIO LEVEL
VR705
P7501
DX SELECT
Q707 (AUDIO DEF: ON)
IC 7551 (AN5043)
BAND SELECT
L.P.F.
C7551, C7552, C7553, R7552, R7553
P7551
P7510
11.5MHz OSC
12MHz OSC
10MHz OSC
MIX
SW
IC 702 (H8DA1048G)
QR710
5.5MHz SIF
X707 5.5MHz B.P.F.
T706 MATCHING FILTER
SIE AMP
FM DET
MUTE
AMP
T707
DET ADJ
(EXCEPT SECAM SIF DET)
IC 705 (μPC1167C2)
Q706
VR707
DP7501 VSL0119
VCR
CH
REC
SP
SLP
X2
OTR
COUNT
AM PM
ED
ON
OFF
7.5mS
30Vp-p
GRID 1
GRID 2
GRID 3
GRID 4
GRID 5
GRID 6
GRID 7
GRID 8
GRID 9
GRID A
GRID B
GRID C
GRID D
IC 7501 (M50935V4AB) (TIMER IC)
AFC DEF
BAND VL
BAND U
DAC
AUDIO DEF(S)
OSC 1
OSC 2
X7501
TIMER OSC
SEG 0
SEG 8
SEGMENT SIGNALS
GRID 1
GRID D
GRID SIGNALS
IC 7505 (MN1280-T) (RESET IC)
POWER FAIL
P.CLR
C3
C2
C1
IN
OUT
IC 7502 (MN1220) (MEMORY IC)
SERIAL DATA IN
SERIAL DATA OUT
SERIAL CLOCK
IR RECIEVER C.B.A.
IC 6701 (μPC1490HA)
VR6701
IC 7503 (MN1280P)
REG 5V
RESET
X6001
Q6004 OSC
P7502
BUZZER
P40
P41
P42
P43
P44
P45
P46
P47
P20
P21
P22
P23
P54
P57
P55
P7504
STOP
EJECT
REW
FF
STILL
REC
PLAY
SLOW
AV
MEMORY
CLEAR
CH UP
CH DOWN
COUNT / TIME
CLOCK
PROG
NEXT FAST
SET ⊕
SET ⊖
ON ⊕
ON ⊖
OFF ⊕
OFF ⊖
PRESET NORMAL
BAND AFC
CLEAR
KEY BOARD
P7505
TIMER SET
POWER SW
TRACK ⊕
TRACK ⊖
POWER SW C.B.A.
(AN3812K)
IC2901-1
IC2901-2
IC2901-17
TORQUE CONTROL
DIFFERENTIAL AMP
PG / FG
POSITION DET
SCHMIT
IC2901-8 0.35Vp-p
IC2901-9
0.8msec
MOTOR 5V
M 1
M 2
M 3
5 V
HE⁻
HE⁺
HALL IC
HEM
CYLINDER DRIVE CIRCUIT (VEP00K62A)
DD SYLINDER MOTOR
P6507
P001
+5V
REFERENCE +2.8V
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
TP2020
ERROR VOLTAGE
JP6504
J6004
R2006
R2005
CURRENT IN SLOW MODE
560mV
TORQUE CONTROL
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
POSITION SIGNAL PROCESS
TORQUE DIRECTION
UNREG +14V
P2001
IC2001-①,③,㉓ 2.2Vp-p
H 3⁻
H 3⁺
H 2⁻
H 2⁺
H 1⁻
H 1⁺
JP6502
J6002
CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L)
IC 2001 (BA6432S) (CAP DRIVE)
DD CAPSTAN MOTOR
FG2
FG 2
FG 1
(60° PHASE DIFFERENCE)
MAIN C.B.A.

MODE \ TERMINAL	NTSC	PAL / SECAM B.G	PAL I	PAL / SECAM D.K
BS 1	L	H	H	L
BS 2	L	H	H	H
BS 3	L	H	L	L

* BS 3 IS USED FOR RF CONV.

IC 702 \ MODE	PIN 3	PIN 7	OSC FREQ.	OUTPUT FREQ.PIN1
PAL/SECAM B,G	H	L	11.5 MHz	5.5 MHz
PAL I	H	L	11.5 MHz	5.5 MHz
PAL/SECAM D,K	H	OPEN	12 MHz	5.5 MHz
NTSC	L	OPEN	10 MHz	5.5 MHz


CAPSTAN SERVO PHASE LOOP
X702 5.5/6.0MHz TRAP
X704 6.5MHz TRAP
X705 4.5MHz TRAP
Q702 (NTSC:ON)
(PAL/SECAM/NTSC VIF)
1st AMP
2nd AMP
VIDEO DET
AMP
RF AGC
IF AGC
AFT
INV
SECAM
AMP
SECAM
CR703 (SECAM: OFF)
QR706
DL.SECAM JP702
IC 701 (M51419SP)
TP705
TP704
DET. ADJ
T705
T703
Q703 BUFFER
TUNER VIDEO IN JP701
TO LUMINANCE & CHROMINANCE
BS2 JP701
BS1 JP701
NTSC
MODE / TERMINAL
NTSC
PAL / SECAM B.G
PAL I
PAL / SECAM D.K
BS 1
BS 2
BS 3
✻ BS 3 IS USED FOR RF CONV.
11.5MHz OSC
12MHz OSC
10MHz OSC
MIX
SW
IC 702 (H8DA1048G)
QR710
5.5MHz SIF
IC 704 (TDA1048G)
(SECAM SIF DEF)
SECAM MUTE
DEMODULATOR
L.P.F.
SIF AMP
AMP
VR708
TUNER AUDIO IN JP701
P7501 CH SELECT
Q707 (AUDIO DEF: ON)
IC 702
MODE
PIN 3
PIN 7
OSC FREQ.
OUTPUT FREQ.PIN1
PAL/SECAM B.G
PAL I
PAL/SECAM D.K
NTSC
T707
DET ADJ
X707 5.5MHz B.P.F.
T708 MATCHING FILTER
SIF AMP
FM DET
MUTE
AMP
(EXCEPT SECAM) SIF DET
Q708
VR707
IC 705 (µPC1167C2)
DP7501 VSL0119
VCR
CH
REC
SP
SLP
X2
OTR
COUNT
AM PM
ED
IC 7501 (M50935V4AB) (TIMER IC)
AFC DEF
BAND VL
BAND U
DAC
AUDIO DEF(S)
OSC 1
OSC 2
SEG 0
SEG 8
GRID 1
GRID D
X7501
TIMER OSC
SEGMENT SIGNALS
GRID SIGNALS
7.5mS
30Vp-p GRID 1
GRID 2
GRID 3
GRID 4
GRID 5
GRID 6
GRID 7
GRID 8
GRID 9
GRID A
GRID B
GRID C
GRID D
DD SYLINDER MOTOR
M 1
M 2
M 3
5 V
HE⁻
HE⁺
HALL IC
HEM
IC 7505 (MN1280-T) (RESET IC)
+5V
POWER FAIL
P.CLR
C3
C2
C1
OUT
IN
SERIAL DATA IN
SERIAL DATA OUT
SERIAL CLOCK
IC 7502 (MN1220) (MEMORY IC)
IR RECIEVER C.B.A.
IC 6701 (µPC1490HA)
VR6701
IC 7503 (MN1280P)
REG 5V
RESET
X6001
Q6004 OSC
P7502
BUZZER
P2001
P2301
IC2001
2.2Vp-p
H3⁻
H3⁺
H2⁻
H2⁺
H1⁻
H1⁺
DD CAPSTAN MOTOR
FG 2
FG 1
(90° PHASE DIFFERENCE)
P40
P41
P42
P43
P44
P45
P46
P47
P20
P21
P22
P23
P54
P57
P55
P7504
STOP
EJECT
REW
FF
STILL
REC
PLAY
SLOW
AV
MEMORY
CLEAR
CH UP
CH DOWN
COUNT/ TIME
CLOCK
PROG
NEXT FAST
SET ⊕
SET ⊖
ON ⊕
ON ⊖
OFF ⊕
OFF ⊖
PRESET NORMAL
BAND AFC
CLEAR
KEY BOARD
P7505
TIMER SET
POWER SW
TRACK ⊕
TRACK ⊖
POWER SW C.B.A.



SYMBOL	TRUTH VALUE TABLE

INVERTER

IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR

IN	(a) (b)	(a)>(b)	(a)<(b)
OUT	(c)	H	L

AND CIRCUIT

IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT

IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

THREE STATES BUFFER

IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

※ High Impedance

TR. SW (NPN TYPE)

BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)

BASE	H	L
TR. SW	OFF	ON

R-S TYPE FLIP-FLOP

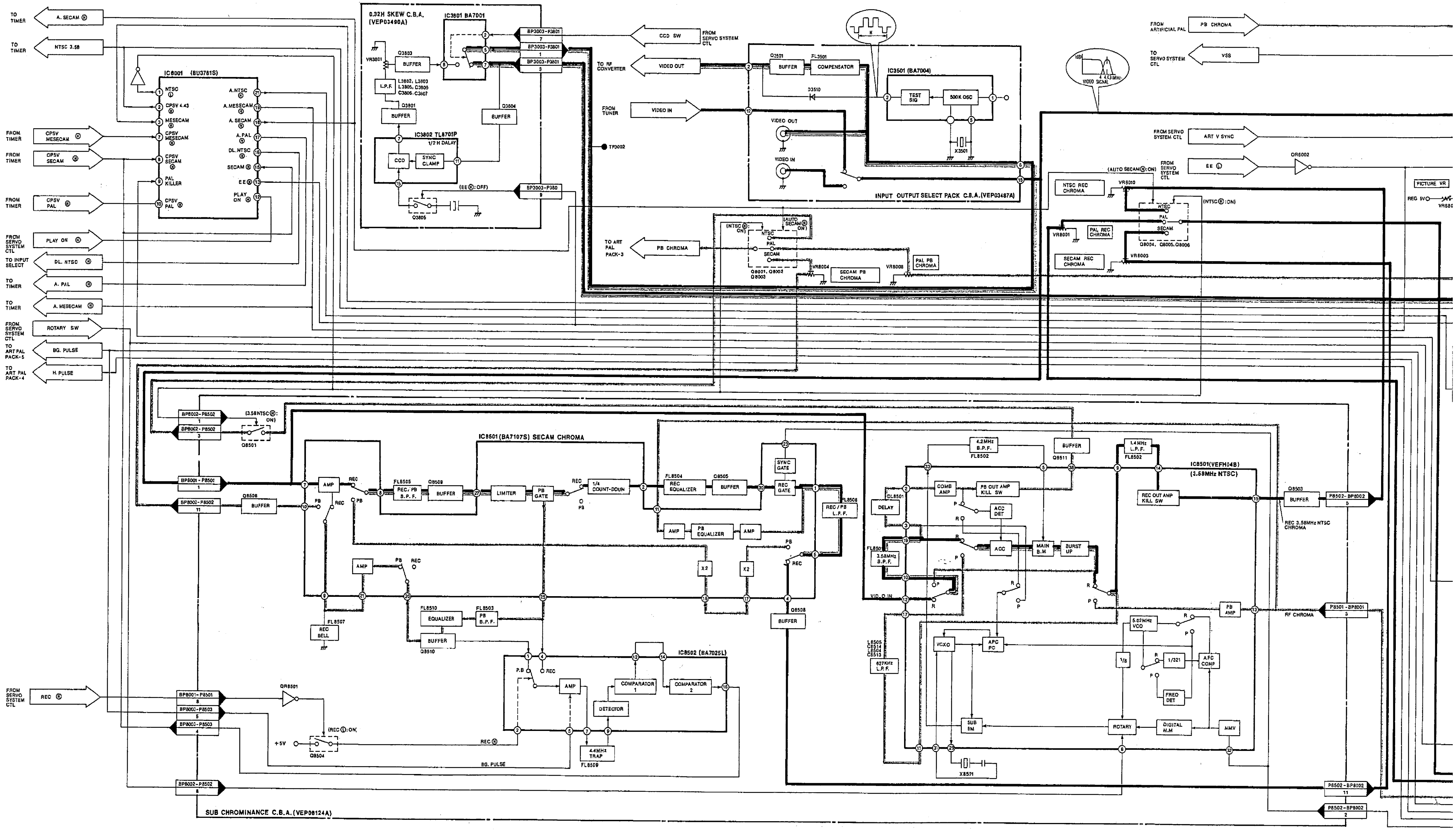
IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reverced.

(a)
(b)
(c)
(d)
(C)
(E)
(B)
S
Q
R
Q̄

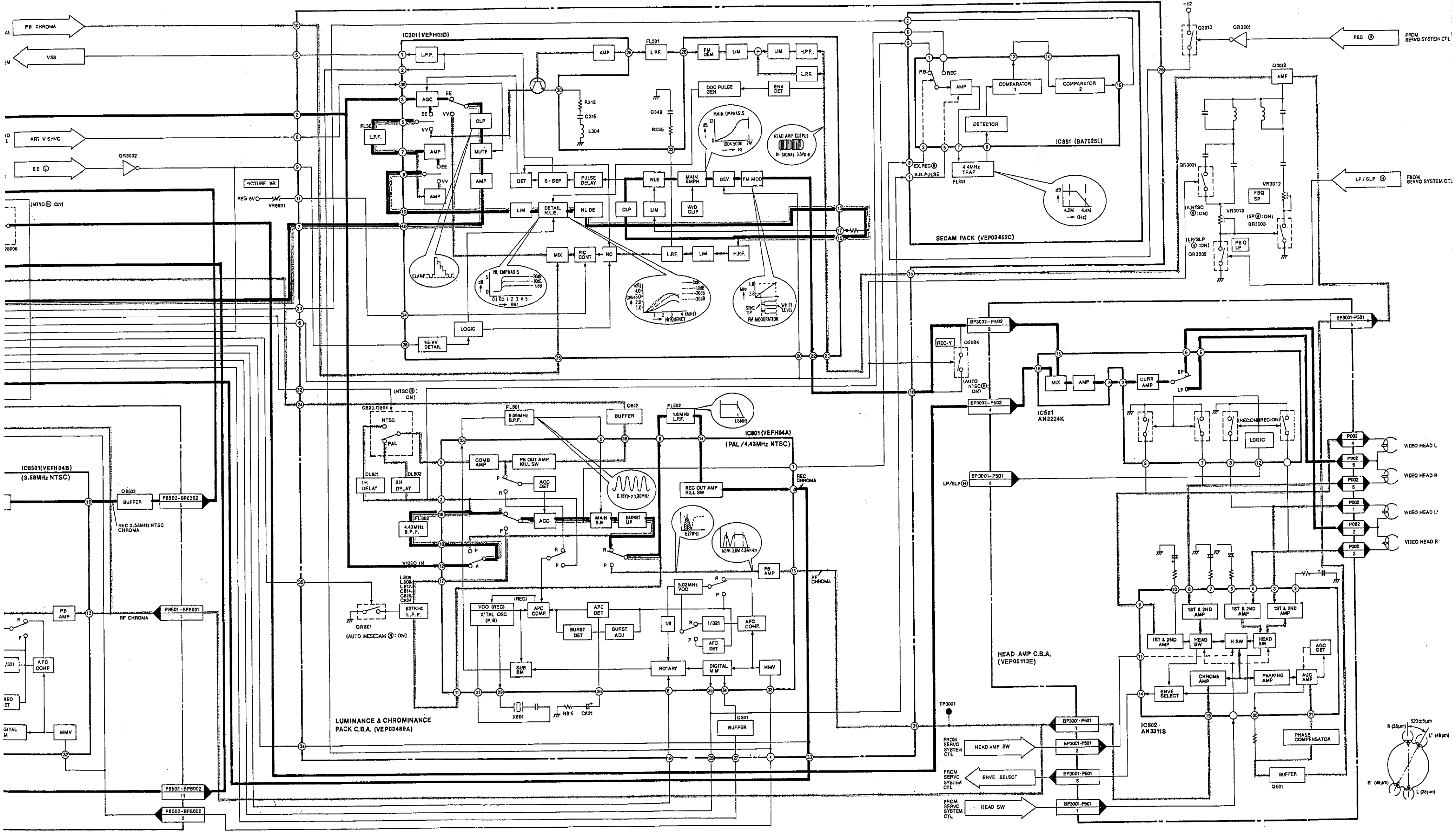
Next Page: LUMINANCE & CHROMINANCE Section

3-2 LUMINANCE & CHROMINANCE BLOCK DIAGRAM


TO TIMER
A. SECAM ⓗ
NTSC 3.58
FROM TIMER
CPSV MESECAM
CPSV SECAM
CPSV PAL
FROM SERVO SYSTEM CTL
PLAY ON
TO INPUT SELECT
DL. NTSC
A. PAL
A. MESECAM
ROTARY SW
TO ART PAL PACK-5
BG. PULSE
TO ART PAL PACK-4
H. PULSE
IC8001 (BU3761S)
NTSC
CPSV 4.43
MESECAM
CPSV MESECAM
CPSV SECAM
PAL KILLER
CPSV PAL
A.NTSC
A.MESECAM
A.SECAM
A.PAL
DL.NTSC
SECAM
EE
PLAY ON
0.32H SKEW C.B.A. (VEP03490A)
IC3801 BA7001
Q3803
BUFFER
VR3801
L.P.F.
L3802, L3803
L3805, C3805
C3806, C3807
Q3801
BUFFER
Q3804
BUFFER
IC3802 TL8705P
1/2 H DALAY
CCD
SYNC CLAMP
(EE ⓗ: OFF)
Q3805
BP3003-P3801
BP3003-P380
CCD SW
FROM SERVO SYSTEM CTL
TO RF CONVERTER
VIDEO OUT
FROM TUNER
VIDEO IN
TP3002
TO ART PAL PACK-3
PB CHROMA
(NTSC ⓗ: ON)
(AUTO SECAM ⓗ: ON)
NTSC
PAL
SECAM
Q8001, Q8002
Q8003
VR8004
SECAM PB CHROMA
VR8008
PAL PB CHROMA
Q3501
FL3501
BUFFER
COMPENSATOR
D3510
IC3501 (BA7004)
TEST SIG
500K OSC
X3501
VIDEO OUT
VIDEO IN
INPUT OUTPUT SELECT PACK C.B.A. (VEP03487A)
FROM ARTIFICIAL PAL
PB CHROMA
TO SERVO SYSTEM CTL
VSS
VIDEO SIGNAL
FROM SERVO SYSTEM CTL
ART V SYNC
(AUTO SECAM ⓗ: ON)
EE
QR8002
NTSC REC CHROMA
VR8010
(NTSC ⓗ: ON)
VR8001
PAL REC CHROMA
Q8004, Q8005, Q8006
SECAM REC CHROMA
VR8003
PICTURE VR
REG 5V
BP8002-P8502
(3.58NTSC ⓗ: ON)
Q8501
IC8501 (BA7107S) SECAM CHROMA
BP8001-P8501
BP8002-P8502
Q8506
BUFFER
AMP
REC
PB
FL8505
Q8509
REC/PB B.P.F.
BUFFER
LIMITER
PB GATE
1/4 COUNT-DOWN
FL8504
Q8505
REC EQUALIZER
BUFFER
SYNC GATE
REC GATE
FL8506
REC/PB L.P.F.
AMP
PB EQUALIZER
X2
FL8507
REC BELL
FL8510
EQUALIZER
FL8503
PB B.P.F.
BUFFER
Q8510
Q8508
BUFFER
IC8502 (BA7025L)
COMPARATOR 1
COMPARATOR 2
DETECTOR
4.4MHz TRAP
FL8509
FROM SERVO SYSTEM CTL
REC ⓗ
QR8501
BP8001-P8501
BP8003-P8503
(REC Ⓛ: ON)
+5V
Q8504
BG. PULSE
SUB CHROMINANCE C.B.A. (VEP08124A)
4.2MHz B.P.F.
FL8502
BUFFER
Q8511
1.4MHz L.P.F.
FL8502
IC8501 (VEFH04B) (3.58MHz NTSC)
COMB AMP
PB OUT AMP KILL SW
ACC DET
DL8501
DELAY
REC OUT AMP KILL SW
Q8503
BUFFER
P8502-BP8002
REC 3.58MHz NTSC CHROMA
FL8501
3.58MHz B.P.F.
ACC
MAIN B.M
BURST UP
VID. D IN
PB AMP
RF CHROMA
P8501-BP8001
5.02MHz VCO
VCXO
APC PC
1/8
1/321
AFC COMP
FREQ DET
L8505 C8514 C8504 C8513
627KHz L.P.F.
SUB BM
ROTARY
DIGITAL M.M
MMV
X8571
P8502-BP8002

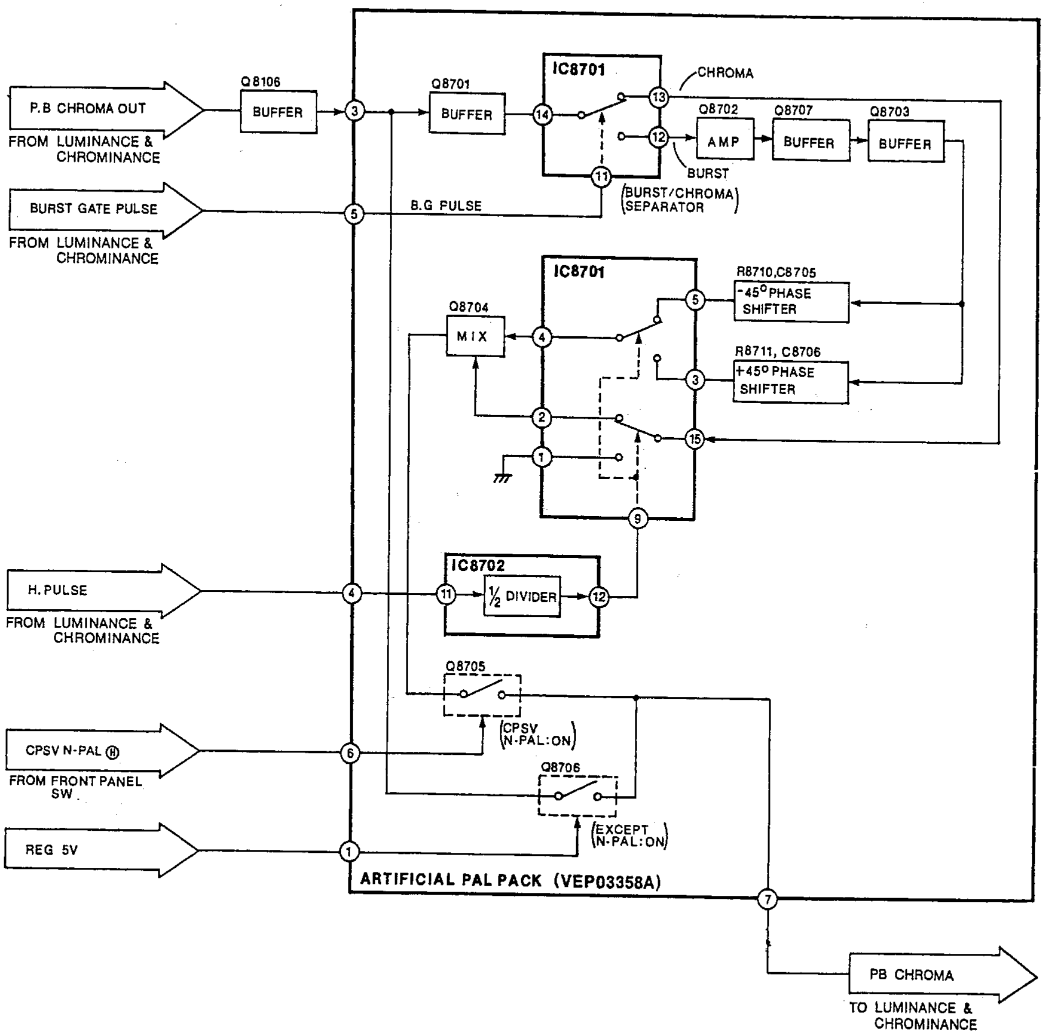
MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

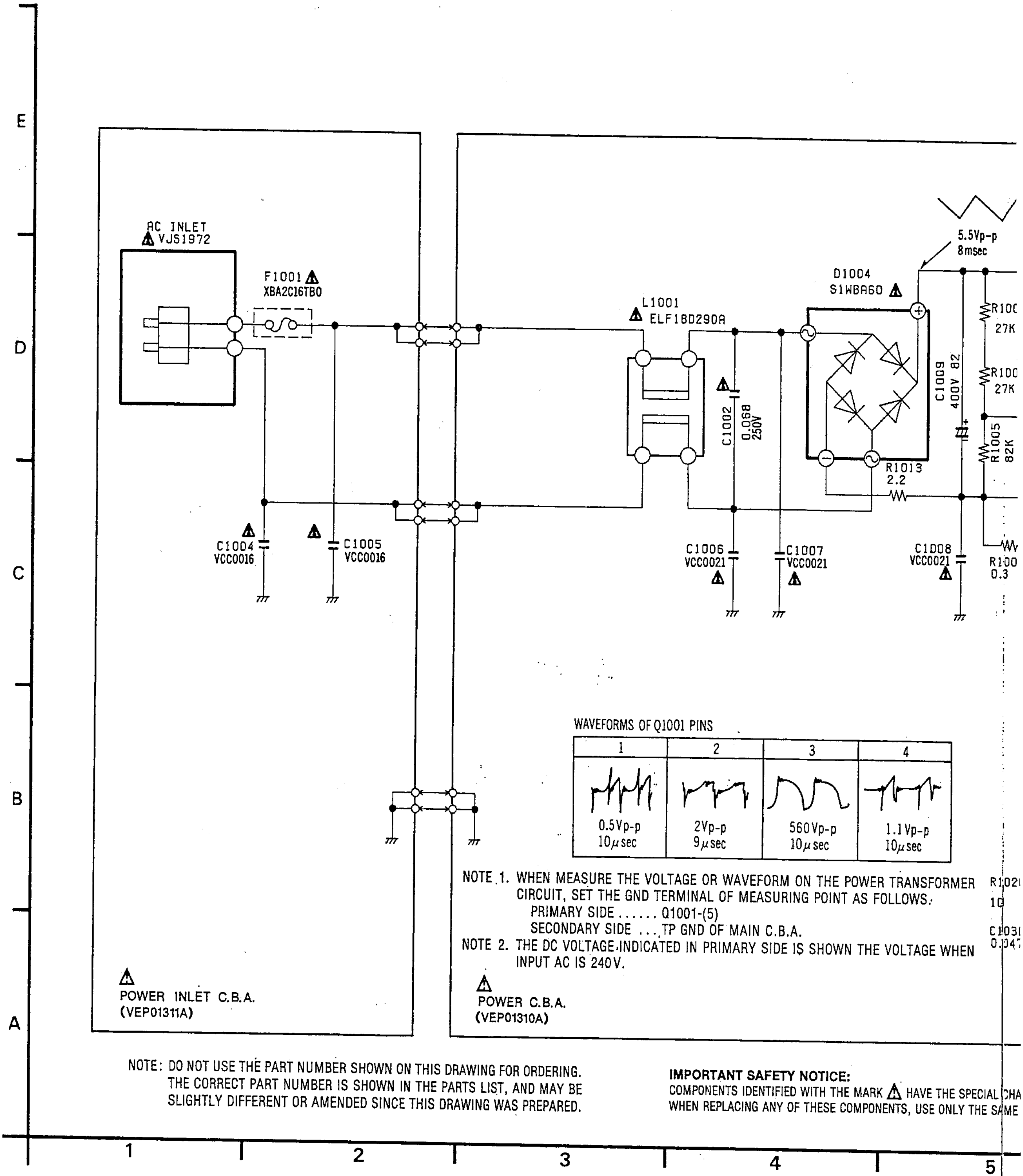

PB CHROMA
VES
ART V SYNC
EE Ⓛ
QR6002
PICTURE VR
REG 5V
VR6801
(NTSC Ⓗ :ON)
IC301 (VEFH03D)
L.P.F.
AGC
EE
VV
CLP
MUTE
AMP
FL301
FM DEM
LIM
H.P.F.
R312
C315
L304
C349
R335
DOC PULSE GEN
ENV DET
MAIN EMPHASIS
HEAD AMP OUTPUT
RF SIGNAL 3.5Vp-p
DET
S-SEP
PULSE DELAY
NLE
MAIN EMPH
DEV
FM MOD
DETAIL N.L.E.
NL DE
W/D CLIP
MIX
PIC CONT
NC
NL EMPHASIS
CLAMP
LOGIC
EE-VV DETAIL
FREQUENCY
SYNC TIP
WHITE LEVEL
FM MODURATION
IC851 (BA7025L)
P.B.
REC
COMPARATOR 1
COMPARATOR 2
DETECTOR
EX.REC Ⓗ
B.G.PULSE
4.4MHz TRAP
FL851
SECAM PACK (VEP03452C)
+12
Q3010
QR3005
REC Ⓗ
FROM SERVO SYSTEM CTL
Q3012
QR3001
VR3012
LP/SLP Ⓗ
(A.NTSC Ⓗ :ON)
VR3013
PBQ SP
(SP Ⓗ :ON)
QR3003
(LP/SLP Ⓗ :ON)
QR3002
PBQ LP
BP3001-P501
BP3002-P502
REC-Y
Q3004
(AUTO NTSC Ⓗ :ON)
MIX
CURR AMP
SP
LP
IC501
AN3224K
(RECON/REC:ON)
LOGIC
P002
VIDEO HEAD L
VIDEO HEAD R
VIDEO HEAD L'
VIDEO HEAD R'
LP/SLP Ⓗ
Q803, Q804
NTSC
PAL
FL801
5.06MHz B.P.F.
Q802
BUFFER
FL802
1.8MHz L.P.F.
IC801 (VEFH04A)
(PAL/4.43MHz NTSC)
COMB AMP
PB OUT AMP KILL SW
ACC DET
DL801
1H DELAY
DL802
2H DELAY
REC OUT AMP KILL SW
REC CHROMA
4.43MHz B.P.F.
ACC
MAIN B.M
BURST UP
VIDEO IN
PB AMP
RF CHROMA
627KHz L.P.F.
QR801
(AUTO MESECAM Ⓗ :ON)
VCO (REC)
X'TAL OSC (P.B)
APC COMP.
APC DET
BURST DET
BURST ADJ
5.02MHz VCO
1/8
1/321
AFC COMP.
AFC DET
SUB BM
ROTARY
DIGITAL M.M
MMV
X801
R815
C821
C801
BUFFER
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489A)
IC8501 (VEFH04B)
(3.58MHz NTSC)
Q8503
BUFFER
P8502-BP8002
REC 3.58MHz NTSC CHROMA
PB AMP
P8501-BP8001
RF CHROMA
AFC COMP
DIGITAL M.M
MMV
P8502-BP8002
HEAD AMP C.B.A. (VEP05113E)
TP3001
FROM SERVO SYSTEM CTL
HEAD AMP SW
ENVE SELECT
HEAD SW
1ST & 2ND AMP
HEAD SW
H SW
AGC DET
CHROMA AMP
PEAKING AMP
AGC AMP
ENVE SELECT
IC502
AN3311S
PHASE COMPENSATOR
BUFFER
Q501
R (35μm)
520±5μm
L' (49μm)
R' (49μm)
L (35μm)

'BACK MODE

3-3 ARTIFICIAL PAL BLOCK DIAGRAM


P.B CHROMA OUT
FROM LUMINANCE & CHROMINANCE
Q8106
BUFFER
Q8701
BUFFER
IC8701
CHROMA
Q8702
AMP
Q8707
BUFFER
Q8703
BUFFER
BURST
(BURST/CHROMA SEPARATOR)
BURST GATE PULSE
FROM LUMINANCE & CHROMINANCE
B.G PULSE
IC8701
R8710,C8705
-45° PHASE SHIFTER
R8711, C8706
+45° PHASE SHIFTER
Q8704
MIX
IC8702
½ DIVIDER
H. PULSE
FROM LUMINANCE & CHROMINANCE
Q8705
(CPSV N-PAL:ON)
CPSV N-PAL Ⓗ
FROM FRONT PANEL SW.
Q8706
(EXCEPT N-PAL:ON)
REG 5V
ARTIFICIAL PAL PACK (VEP03358A)
PB CHROMA
TO LUMINANCE & CHROMINANCE

3-4 POWER SCHEMATIC DIAGRAM


E
D
C
B
A
1
2
3
4
5
AC INLET
VJS1972
F1001
XBA2C16TB0
L1001
ELF18D290A
D1004
S1WBA60
5.5Vp-p
8msec
C1002
0.068
250V
C1009
400V 82
R100
27K
R100
27K
R1005
82K
R1013
2.2
C1004
VCC0016
C1005
VCC0016
C1006
VCC0021
C1007
VCC0021
C1008
VCC0021
R100
0.3
POWER INLET C.B.A.
(VEP01311A)
POWER C.B.A.
(VEP01310A)

WAVEFORMS OF Q1001 PINS

1	2	3	4
0.5Vp-p 10μsec	2Vp-p 9μsec	560Vp-p 10μsec	1.1Vp-p 10μsec

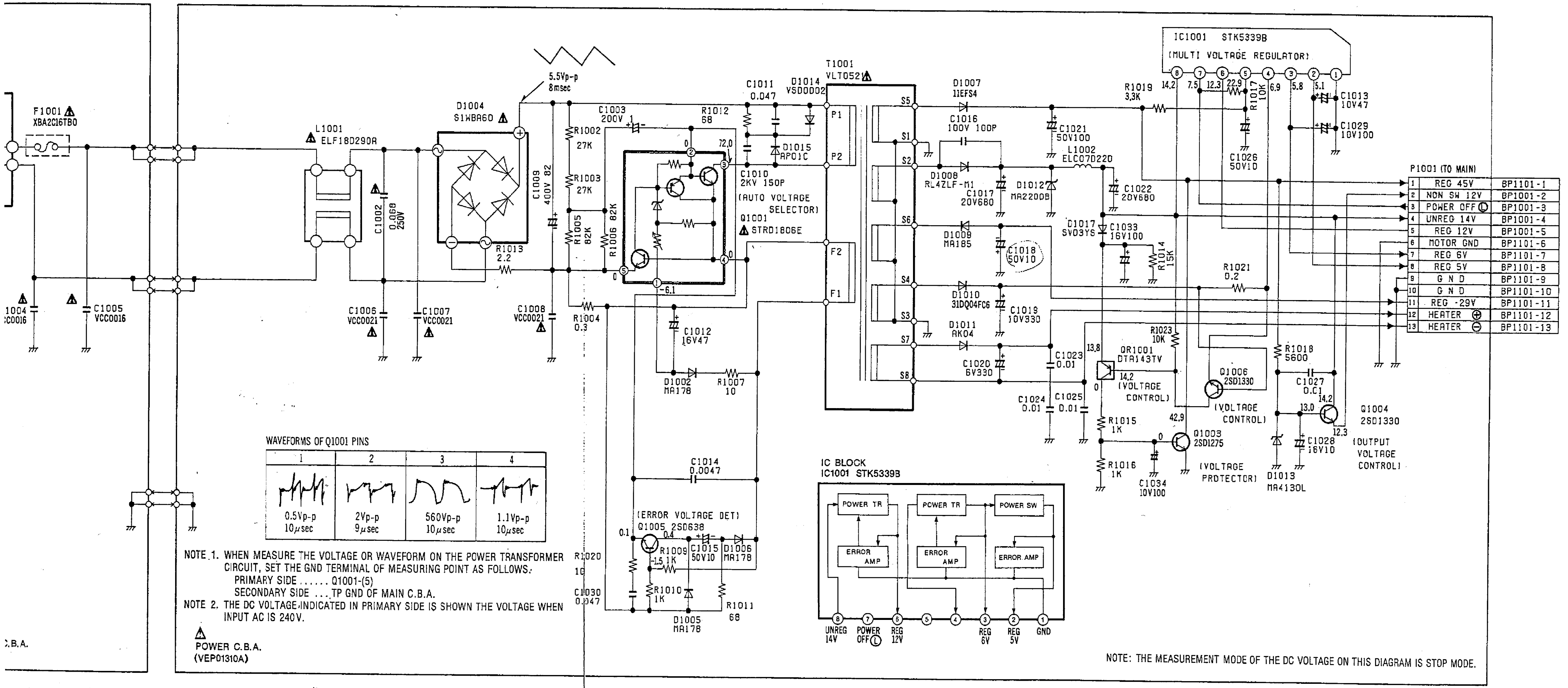
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ...... Q1001-(5)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHA
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME

EMATIC DIAGRAM


F1001 ⚠
XBA2C16TB0
L1001
⚠ ELF18D290R
C1002 0.068 250V
D1004
S1WBA60 ⚠
5.5Vp-p
8msec
C1009 400V 82
R1002 27K
R1003 27K
R1005 82K
R1006 82K
R1013 2.2
C1003 200V 1
R1012 68
72.0
Q1001
⚠ STRD1806E
-6.1
C1011 0.047
D1014 VSD0002
D1015 RP01C
C1010 2KV 150P
(AUTO VOLTAGE SELECTOR)
T1001
VLT052 ⚠
P1 P2 F2 F1
S5 S1 S2 S6 S4 S3 S7 S8
1004 CC0016
C1005 VCC0016
C1006 VCC0021
C1007 VCC0021
C1008 VCC0021
R1004 0.3
C1012 16V47
D1002 MA178
R1007 10
C1014 0.0047
(ERROR VOLTAGE DET)
Q1005 2SD638
R1009 1.5 1K
C1015 50V10
D1006 MA178
R1010 1K
D1005 MA178
R1011 68
R1020 10
C1030 0.047
D1007 11EFS4
C1016 100V 100P
D1008 RL4ZLF-M1
C1017 20V680
D1012 MA2200B
C1021 50V100
L1002 ELC07D220
C1022 20V680
D1009 MA185
C1018 50V10
D1017 SV03YS
C1033 16V100
R1014 15K
D1010 31DQ04FC6
C1019 10V330
D1011 RK04
C1020 6V330
C1023 0.01
C1024 0.01
C1025 0.01
IC1001 STK5339B
(MULTI VOLTAGE REGULATOR)
R1019 3.3K
R1017 10K
C1026 50V10
C1013 10V47
C1029 10V100
R1021 0.2
R1023 10K
QR1001 DTA143TV
(VOLTAGE CONTROL)
Q1006 2SD1330
(VOLTAGE CONTROL)
R1018 5600
C1027 0.01
Q1004 2SD1330
(OUTPUT VOLTAGE CONTROL)
R1015 1K
R1016 1K
Q1003 2SD1275
(VOLTAGE PROTECTOR)
C1034 10V100
C1028 16V10
D1013 MA4130L
P1001 (TO MAIN)
1 REG 45V BP1101-1
2 NON SW 12V BP1001-2
3 POWER OFF Ⓛ BP1001-3
4 UNREG 14V BP1001-4
5 REG 12V BP1001-5
6 MOTOR GND BP1101-6
7 REG 6V BP1101-7
8 REG 5V BP1101-8
9 GND BP1101-9
10 GND BP1101-10
11 REG -29V BP1101-11
12 HEATER ⊕ BP1101-12
13 HEATER ⊖ BP1101-13
WAVEFORMS OF Q1001 PINS
1 0.5Vp-p 10μsec
2 2Vp-p 9μsec
3 560Vp-p 10μsec
4 1.1Vp-p 10μsec
IC BLOCK
IC1001 STK5339B
POWER TR
POWER TR
POWER SW
ERROR AMP
ERROR AMP
ERROR AMP
UNREG 14V
POWER OFF Ⓛ
REG 12V
REG 6V
REG 5V
GND

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ...... Q1001-(5)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

⚠
POWER C.B.A.
(VEP01310A)

:.B.A.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

SE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
ECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

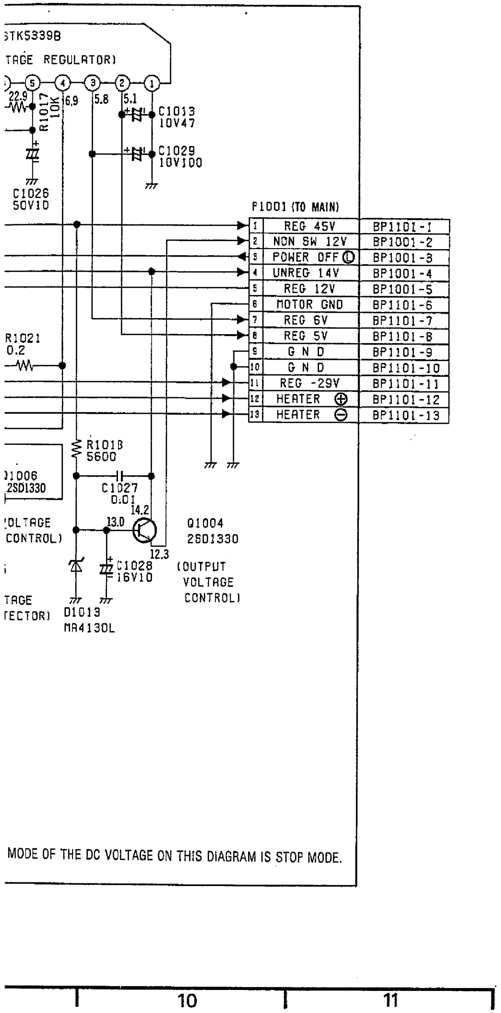
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

2 3 4 5 6 7 8 9 10 11

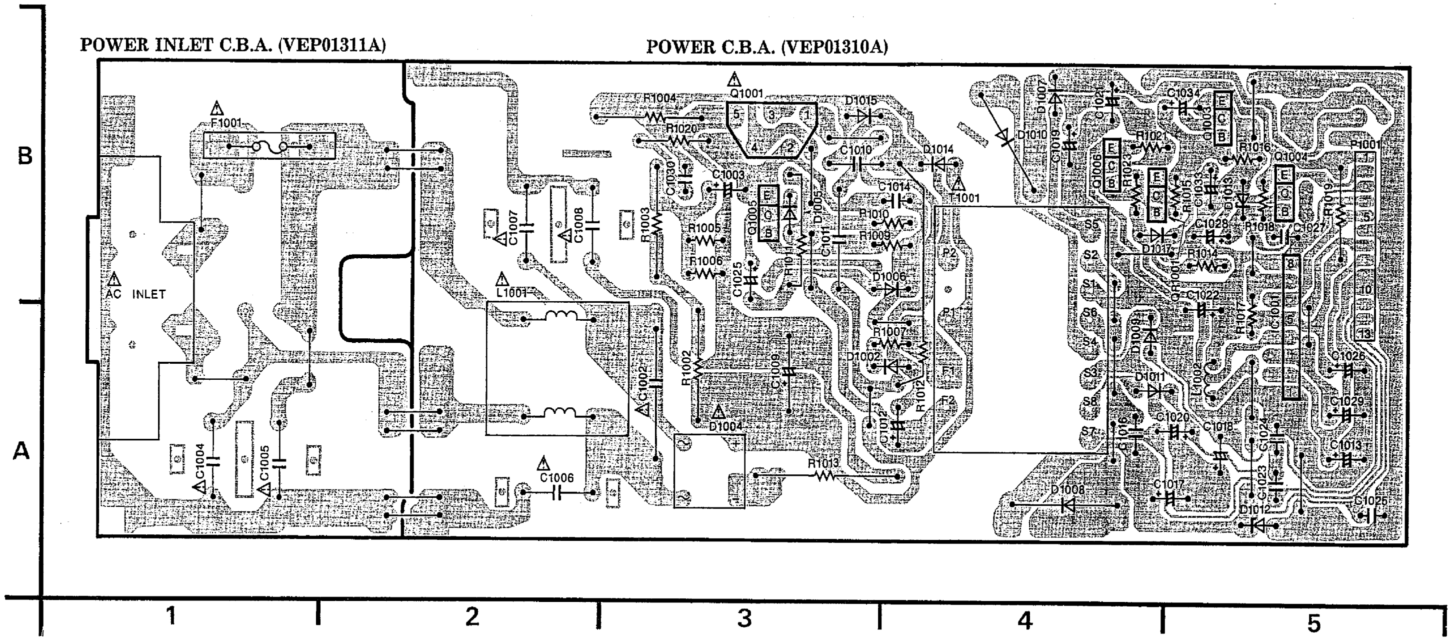
3-5 POWER C B A (VEP01310A) & POWER INLET C B A (VEP01311A)

POWER C.B.A.	
Transistor	
Q1001	B-3
Q1003	B-5
Q1004	B-5
Q1005	B-3
Q1006	B-4
Transistor & Resistor	
QR1001	B-4
Integrated Circuit	
IC1001	B-5
Connector	
P1001	B-5

ADDRESS INFORMATION


STK5339B
TAGE REGULATOR)
R1017 10K
C1013 10V47
C1029 10V100
C1026 50V10
P1001 (TO MAIN)
1 REG 45V BP1101-1
2 NON SW 12V BP1001-2
3 POWER OFF Ⓛ BP1001-3
4 UNREG 14V BP1001-4
5 REG 12V BP1001-5
6 MOTOR GND BP1101-6
7 REG 6V BP1101-7
8 REG 5V BP1101-8
9 GND BP1101-9
10 GND BP1101-10
11 REG -29V BP1101-11
12 HEATER ⊕ BP1101-12
13 HEATER ⊖ BP1101-13
R1021 0.2
R1018 5600
Q1006 2SD1330
C1027 0.01
VOLTAGE CONTROL)
Q1004 2SD1330
(OUTPUT VOLTAGE CONTROL)
C1028 16V10
D1013 MA4130L
TAGE TECTOR)
10
11

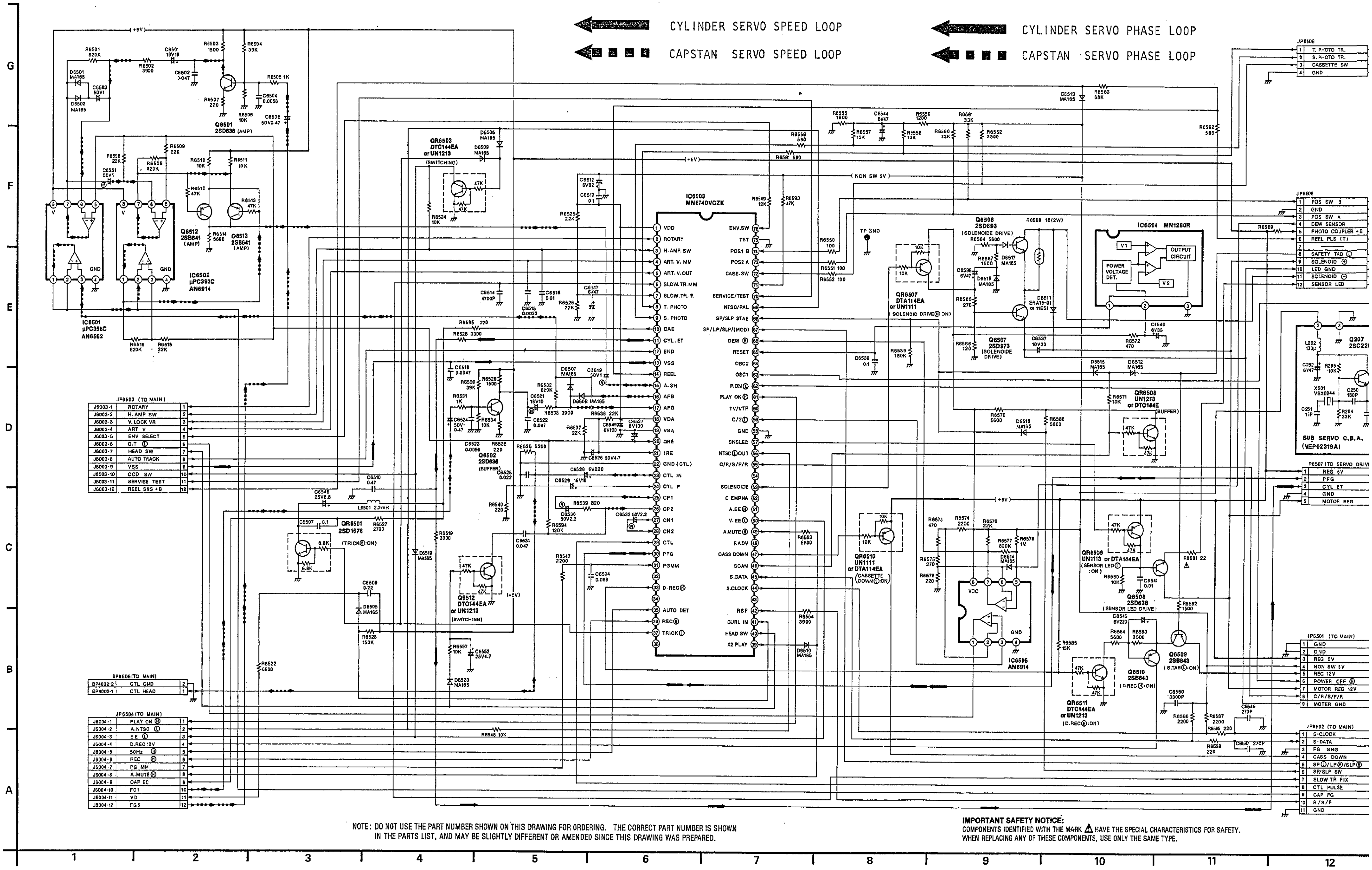
MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.


POWER INLET C.B.A. (VEP01311A)

POWER C.B.A. (VEP01310A)

B
A
1
2
3
4
5
AC INLET
F1001
L1001
T1001
C1004
C1005
C1006
C1007
C1008
Q1001
D1015
D1014
D1007
D1010

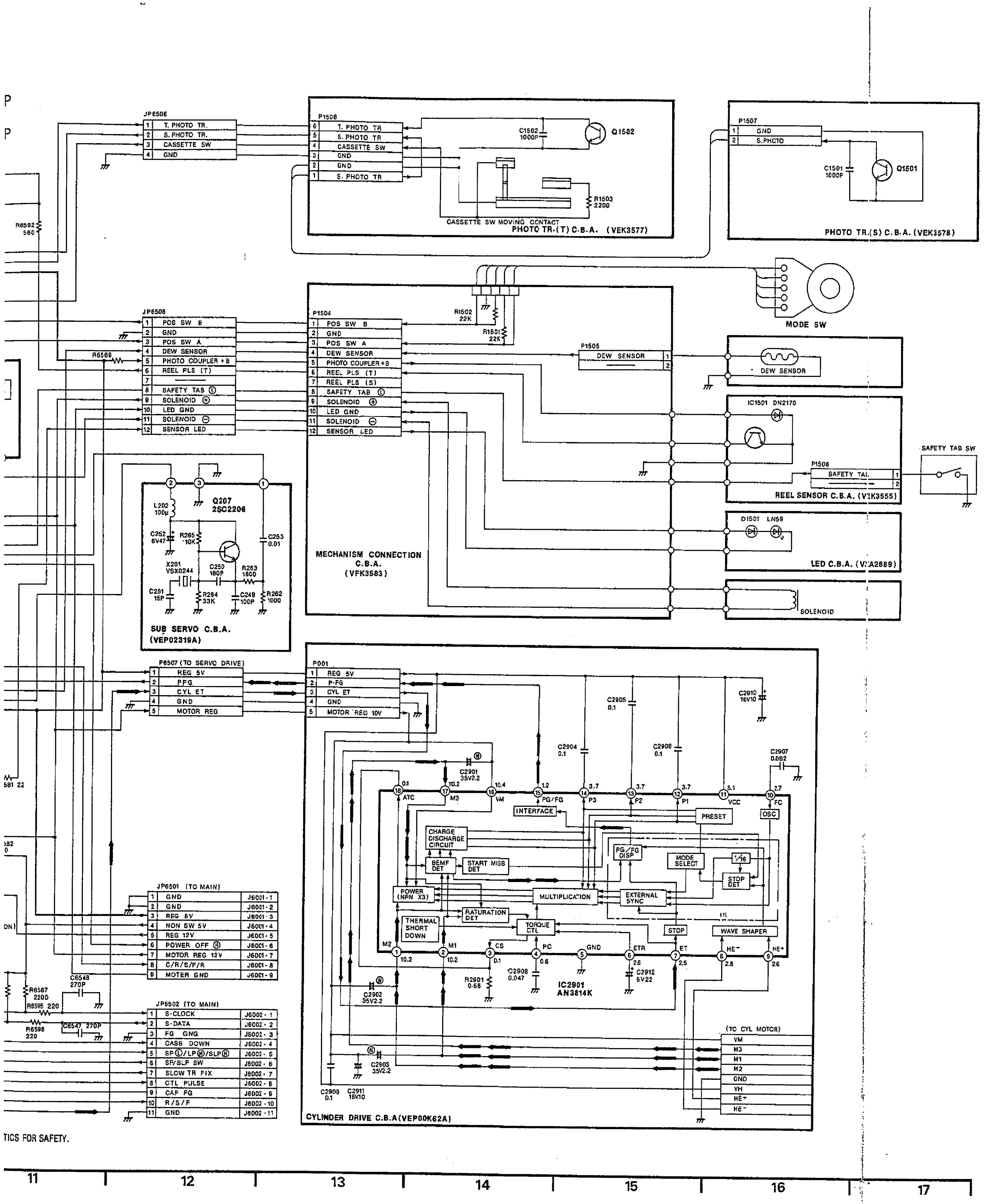
3-6 SERVO & SYSTEM CONTROL SCHEMATIC DIAGRAM


CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
IC6501 μPC358C AN6562
IC6502 μPC393C AN6914
Q6501 2SD638 (AMP)
Q6512 2SB641 (AMP)
Q6513 2SB641 (AMP)
QR6503 DTC144EA or UN1213 (SWITCHING)
IC6503 MN6740VCZK
VDD
ROTARY
H.AMP.SW
ART.V.MM
ART.V.OUT
SLOW.TR.MM
SLOW.TR.R
T.PHOTO
S.PHOTO
CAE
CYL.ET
END
VSS
REEL
A.SH
AFB
AFG
VDA
VSA
CRE
IRE
GND (CTL)
CTL IN
CTL P
CP1
CP2
CN1
CN2
CTL
PFG
PGMM
D.REC
AUTO DET
REC
TRICK
ENV.SW
TST
POS1 B
POS2 A
CASS.SW
SERVICE/TEST
NTSC/PAL
SP/SLP STAB
SP/LP/SLP/(MOD)
DEW
RESET
OSC2
OSC1
P.ON
PLAY ON
TV/VTR
C/T
GND
SNSLED
NTSC OUT
C/R/S/F/R
SOLENOIDE
C EMPHA
A.EE
V.EE
A.MUTE
F.ADV
CASS DOWN
SCAN
S.DATA
S.CLOCK
RSF
CURL IN
HEAD SW
X2 PLAY
Q6502 2SD636 (BUFFER)
QR6501 2SD1676 (TRICK ON)
Q6512 DTC144EA or UN1213 (SWITCHING)
Q6506 2SD693 (SOLENOIDE DRIVE)
QR6507 DTA114EA or UN1111 (SOLENOIDE DRIVE ON)
Q6507 2SD973 (SOLENOIDE DRIVE)
IC6504 MN1280R
POWER VOLTAGE DET.
OUTPUT CIRCUIT
QR6508 UN1213 or DTC144E (BUFFER)
QR6510 UN1111 or DTA114EA (CASSETTE DOWN ON)
IC6505 AN6914
QR6509 UN1113 or DTA144EA (SENSOR LED ON)
Q6508 2SD638 (SENSOR LED DRIVE)
Q6510 2SB643 (D.REC ON)
Q6509 2SB643 (S.TAB ON)
QR6511 DTC144EA or UN1213 (D.REC ON)
SUB SERVO C.B.A. (VEP02319A)
Q207 2SC22
JP6503 (TO MAIN)
J6003-1 ROTARY
J6003-2 H.AMP SW
J6003-3 V.LOCK VR
J6003-4 ART V
J6003-5 ENV SELECT
J6003-6 C.T
J6003-7 HEAD SW
J6003-8 AUTO TRACK
J6003-9 VSS
J6003-10 CCD SW
J6003-11 SERVISE TEST
J6003-12 REEL SNS +B
BP6505 (TO MAIN)
BP4002-2 CTL GND
BP4002-1 CTL HEAD
JP6504 (TO MAIN)
J6004-1 PLAY ON
J6004-2 A.NTSC
J6004-3 EE
J6004-4 D.REC 12V
J6004-5 50Hz
J6004-6 REC
J6004-7 PG MM
J6004-8 A.MUTE
J6004-9 CAP EC
J6004-10 FG1
J6004-11 VD
J6004-12 FG2
JP6506
1 T.PHOTO TR.
2 S.PHOTO TR.
3 CASSETTE SW
4 GND
JP6508
1 POS SW B
2 GND
3 POS SW A
4 DEW SENSOR
5 PHOTO COUPLER +B
6 REEL PLS (T)
7
8 SAFETY TAB
9 SOLENOID ⊕
10 LED GND
11 SOLENOID ⊖
12 SENSOR LED
P6507 (TO SERVO DRIVE)
1 REG 5V
2 PFG
3 CYL ET
4 GND
5 MOTOR REG
JP6501 (TO MAIN)
1 GND
2 GND
3 REG 5V
4 NON SW 5V
5 REG 12V
6 POWER OFF
7 MOTOR REG 12V
8 C/R/S/F/R
9 MOTER GND
JP6502 (TO MAIN)
1 S-CLOCK
2 S-DATA
3 FG GNG
4 CASS DOWN
5 SP/LP/SLP
6 SP/SLP SW
7 SLOW TR FIX
8 CTL PULSE
9 CAP FG
10 R/S/F
11 GND
(+5V)
NON SW 5V
TP GND

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
POWER Section


JP6506
T. PHOTO TR.
S. PHOTO TR.
CASSETTE SW
GND
P1508
Q1502
C1502 1000P
R1503 2200
CASSETTE SW MOVING CONTACT
PHOTO TR.(T) C.B.A. (VEK3577)
P1507
S.PHOTO
Q1501
C1501 1000P
PHOTO TR.(S) C.B.A. (VEK3578)
R6592 560
MODE SW
JP6508
P1504
POS SW B
POS SW A
DEW SENSOR
PHOTO COUPLER +B
REEL PLS (T)
REEL PLS (S)
SAFETY TAB
SOLENOID
LED GND
SENSOR LED
R6569
R1502 22K
R1501 22K
P1505
IC1501 DN2170
P1506
SAFETY TAB SW
REEL SENSOR C.B.A. (VEK3555)
D1501 LN59
LED C.B.A. (VEA2889)
SOLENOID
Q207 2SC2206
L202 100µ
X201 VSX0244
SUB SERVO C.B.A. (VEP02319A)
MECHANISM CONNECTION C.B.A. (VFK3583)
P6507 (TO SERVO DRIVE)
REG 5V
PFG
CYL ET
MOTOR REG
P001
MOTOR REG 10V
ATC
M3
VM
PG/FG
P3
P2
P1
VCC
FC
INTERFACE
PRESET
OSC
CHARGE DISCHARGE CIRCUIT
BEMF DET
START MISS DET
PG/FG DISP
MODE SELECT
STOP DET
POWER (NPN X3)
MULTIPLICATION
EXTERNAL SYNC
SATURATION DET
THERMAL SHORT DOWN
TORQUE CTL
STOP
WAVE SHAPER
IC2901 AN3814K
(TO CYL MOTOR)
CYLINDER DRIVE C.B.A (VEP00K62A)
JP6501 (TO MAIN)
NON SW 5V
REG 12V
POWER OFF
MOTOR REG 12V
C/R/S/F/R
MOTER GND
JP6502 (TO MAIN)
S-CLOCK
S-DATA
FG GNG
CASS DOWN
SP/SLP SW
SLOW TR FIX
CTL PULSE
CAP FG
R/S/F
TICS FOR SAFETY.
11
12
13
14
15
16
17

SERVO & SYSTEM CONTROL ICs DC VOLTAGE CHART (SP mode/NTSC)

REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
STOP	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			0	2.5	2.4	0	2.5	2.4	1.5	5.0		
PLAY	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.6	2.5	2.5	0	2.5	2.4	1.6	5.0		
REC	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.6	2.5	2.5	0	2.5	2.4	1.6	5.0		
F.F.	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.4	2.5	2.5	0	2.5	2.4	1.4	5.0		
REW	2.5	2.5	0	0	2.5	2.5	2.5	5.0			1.7	2.5	2.5	0	2.5	2.4	1.7	5.0		

REF. NO.	IC6503																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.0	5.0	0	0.8	0	0	2.5	3.0	3.0	0.2	4.2	3.2	2.8	4.7	2.5	2.5	2.5	5.0	0	2.5
PLAY	5.0	2.9	0	0.9	0	0	0	2.5	3.0	2.5	2.4	3.9	2.5	4.7	2.5	2.5	2.5	5.0	0	2.5
REC	5.0	2.9	0	0.9	0	0	2.5	3.0	3.0	2.5	2.4	0	2.5	4.3	2.5	2.5	2.5	5.0	0	2.5
F.F.	5.0	5.0	0	0.8	0	0	2.5	3.0	3.0	2.6	4.2	3.1	2.5	2.0	3.0	2.5	2.5	5.0	0	2.5
REW	5.0	5.0	0	0.8	0	0	2.5	3.0	3.0	2.6	4.2	3.1	2.5	2.0	2.5	2.5	2.5	5.0	0	2.5

REF. NO.	IC6503																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	2.5	0	2.5	2.5	1.1	3.1	3.9	2.1	0	5.0	0	0	0	0	0	0	5.0	0	0	0
PLAY	2.5	0	2.5	2.5	1.1	2.2	3.9	3.2	3.3	1.3	2.8	0	0	0	0	0	5.0	0	0	2.6
REC	2.5	0	3.1	2.4	2.4	2.3	3.9	3.7	3.3	1.3	2.8	5.0	5.0	5.0	0	4.9	5.0	0	0	2.9
F.F.	2.5	0	2.5	2.5	1.5	1.7	3.6	3.5	2.7	4.9	0	0	0	0	0	0	5.0	0	0	0
REW	2.5	0	2.5	2.5	1.4	1.6	3.6	3.3	3.3	4.9	0	0	0	0	0	0	5.0	0	0	0

REF. NO.	IC6503																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	4.9	2.1	0	4.6	4.1	4.9	0	0	0	0	5.0	5.0	5.0	0	0	5.6	4.4	0	0	0
PLAY	4.9	0	0	4.7	4.2	4.9	0	0	0	5.0	0	5.0	5.0	0	5.0	0	4.4	0	0	0
REC	4.9	0	0	4.6	4.3	4.9	0	0	0	0	5.0	5.0	5.0	0	5.0	0	4.4	0	0	0
F.F.	4.9	0	0	4.6	4.4	4.9	0	0	0	0	5.0	5.0	5.0	0	0	0	4.4	0	0	0
REW	4.9	5.0	0	4.6	4.2	4.9	0	0	0	0	5.0	5.0	5.0	0	0	0	4.4	0	0	0

REF. NO.	IC6503																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
STOP	0	0	–	–	5.0	0	0	0.3	0	5.0	5.0	2.0	5.0	2.0	0	4.6				
PLAY	5.0	0	–	–	5.0	0	0	0.3	0	5.0	5.0	2.0	0	5.0	0	4.5				
REC	0	0	–	–	5.0	0	0	0.3	0	5.0	5.0	2.0	0	5.0	0	4.4				
F.F.	0	0	–	–	5.0	0	0	0.3	0	5.0	5.0	2.0	5.0	2.0	0	4.6				
REW	0	0	–	–	5.0	0	0	0.3	0	5.0	5.0	2.0	5.0	2.0	0	4.6				

REF. NO.	IC6504										IC6505									
MODE	1	2	3								1	2	3	4	5	6	7	8		
STOP	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
PLAY	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
REC	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
F.F.	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
REW	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		

SERVO & SYSTEM CONTROL TRANSISTORs DC VOLTAGE CHART (SP mode/NTSC)

REF. NO.	Q6501			Q6502			Q6503			Q6504			Q6505			Q6506		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.3	2.6	1.0	0.3	2.7	1.0	0	0	0.6	0.7	5.0	1.2	0	4.6	0.2	13.1	13.1	4.6
PLAY	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.4	5.0	1.0	0.2	3.2	0.8	9.9	9.9	1.4
REC	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	3.1	5.0	2.5	0.4	2.0	1.0	9.9	9.9	1.4
F.F.	0.3	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.9	5.0	1.6	0.3	2.3	0.9	13.1	13.1	4.5
REW	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.9	5.0	1.5	0.3	2.3	0.9	13.0	13.0	4.5

REF. NO.	Q6507			Q6508			Q6509			Q6510			Q6511			Q6512		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	13.1	0	0.8	13.1	0.6	12.2	12.2	11.4	12.2	0.4	12.2	1.4	1.4	0.9	0	1.4	1.4
PLAY	0	9.9	0	0.8	9.9	0.6	12.2	12.2	11.4	12.2	0.4	12.2	1.6	0.9	1.7	1.6	0	1.8
REC	0	9.9	0	0.8	9.9	0.6	12.1	12.0	11.4	12.0	11.9	11.3	1.6	1.0	1.7	1.6	1.0	1.8
F.F.	0	13.1	0	0.8	13.1	0.6	12.2	12.2	11.4	12.2	0.4	12.2	1.4	1.0	1.5	1.4	1.0	1.7
REW	0	13.1	0	0.8	13.0	0.6	12.2	12.2	11.4	12.2	0.4	12.2	1.7	0.7	1.9	1.7	0.7	1.7

REF. NO.	QR6501			QR6502			QR6503			QR6507			QR6508			QR6509		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
PLAY	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
REC	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
F.F.	0	0	5.0	0	0	5.0	0	0	5.0	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
REW	0	0	3.5	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4

REF. NO.	QR6510			QR6511														
MODE	E	C	B	E	C	B												
STOP	5.0	4.8	0	0	12.2	0												
PLAY	5.0	4.8	0	0	12.2	0												
REC	5.0	4.8	0	0	0	5.0												
F.F.	5.0	4.8	0	0	12.2	0												
REW	5.0	4.8	0	0	12.2	0												

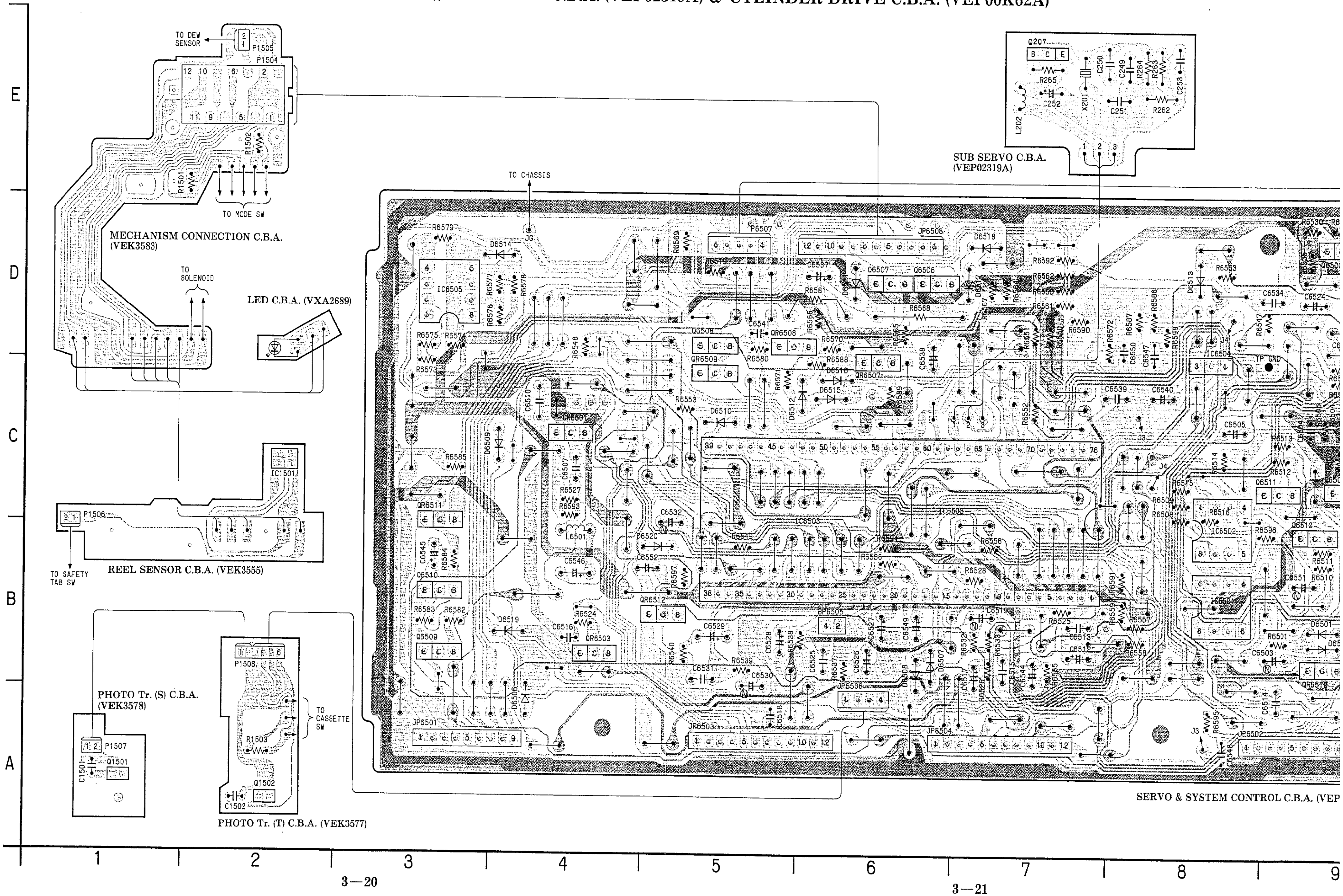
SERVO & SYSTEM CONTROL ICs DC VOLTAGE CHART (SP mode/PAL)

REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
STOP	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			0	2.5	2.4	0	2.5	2.4	1.5	5.0		
PLAY	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.6	2.5	2.5	0	2.5	2.4	1.6	5.0		
REC	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.6	2.5	2.5	0	2.5	2.4	1.6	5.0		
F.F.	2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.4	2.5	2.5	0	2.5	2.4	1.4	5.0		
REW	2.5	2.5	0	0	2.5	2.5	2.5	5.0			1.7	2.5	2.5	0	2.5	2.4	1.7	5.0		
REF. NO.	IC6503																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.0	5.0	0	0	0	0	2.5	3.0	3.0	0.2	4.2	3.2	2.5	4.7	2.5	2.5	2.5	5.0	0	2.5
PLAY	5.0	3.0	0	0	0	0	2.5	3.0	3.0	2.5	2.4	2.4	2.9	4.2	2.5	2.5	2.5	5.0	0	2.5
REC	5.0	3.0	0	0	0	0	2.5	3.0	3.0	2.5	2.4	0	2.5	4.2	2.5	2.5	2.5	5.0	0	2.5
F.F.	5.0	5.0	0	0	0	0	2.5	3.0	3.0	2.6	4.2	3.1	2.5	2.0	3.0	2.5	2.5	5.0	0	2.5
REW	5.0	5.0	0	0	0	0	2.5	3.0	3.0	2.6	4.2	3.1	2.5	2.0	2.5	2.5	2.5	5.0	0	2.5
REF. NO.	IC6503																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	2.5	0	2.5	2.5	1.1	3.1	3.9	2.1	0	5.0	0	0	0	0	0	0	5.0	0	0	0
PLAY	2.5	0	2.5	2.5	1.2	2.2	3.9	3.0	3.3	1.2	2.9	0	0	0	5.0	0	5.0	0	0	3.0
REC	2.5	0	3.3	2.4	2.4	2.2	3.7	3.7	3.3	1.2	2.9	5.0	5.0	5.0	5.0	4.9	5.0	0	0	3.0
F.F.	2.5	0	2.5	2.5	1.5	1.7	3.6	3.5	2.7	4.9	0	0	0	0	5.0	0	5.0	0	0	0
REW	2.5	0	2.5	2.5	1.4	1.6	3.6	3.3	3.3	4.9	0	0	0	0	5.0	0	5.0	0	0	0
REF. NO.	IC6503																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	4.9	2.1	0	4.6	4.1	4.9	0	0	0	0	5.0	5.0	5.0	0	0	5.0	4.4	0	0	0
PLAY	4.9	0	0	4.6	4.2	4.9	0	0	0	5.0	0	5.0	5.0	0	5.0	0	4.4	0	0	0
REC	4.9	0	0	4.6	4.2	4.9	0	0	0	0	5.0	5.0	5.0	0	5.0	5.0	4.4	0	0	0
F.F.	4.9	0	0	4.6	4.4	4.9	0	0	0	0	5.0	5.0	5.0	0	0	0	4.4	0	0	0
REW	4.9	5.0	0	4.6	4.2	4.9	0	0	0	0	5.0	5.0	5.0	0	0	0	4.4	0	0	0
REF. NO.	IC6503																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
STOP	0	0	2.4	–	5.0	0	0	0.3	4.9	5.0	5.0	2.0	5.0	2.0	0	4.6				
PLAY	5.0	0	–	–	5.0	0	0	0.3	4.9	5.0	5.0	2.0	0	5.0	0	4.5				
REC	0	0	–	–	5.0	0	0	0.3	4.9	5.0	5.0	2.0	0	5.0	0	4.4				
F.F.	0	0	–	–	5.0	0	0	0.3	3.6	5.0	5.0	2.0	5.0	2.0	0	4.6				
REW	0	0	–	–	5.0	0	0	0.3	3.6	5.0	5.0	2.0	5.0	2.0	0	4.6				
REF. NO.	IC6504										IC6505									
MODE	1	2	3								1	2	3	4	5	6	7	8		
STOP	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
PLAY	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
REC	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
F.F.	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		
REW	5.0	5.0	0								0	1.5	0	0	0	0.3	0	5.0		

SERVO & SYSTEM CONTROL TRANSISTORs DC VOLTAGE CHART (SP mode/PAL)

REF. NO.	Q6501			Q6502			Q6503			Q6504			Q6505			Q6506		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.3	2.6	1.0	0.3	2.7	1.0	0	0	0.6	0.7	5.0	1.2	0	4.6	0.2	13.1	13.1	4.6
PLAY	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.4	5.0	1.2	0.2	3.3	0.8	9.8	9.9	1.4
REC	0.4	2.6	1.0	0.3	2.7	1.0	0	0	0.5	3.1	5.0	2.5	0.4	2.0	1.0	9.8	9.8	1.3
F.F.	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.9	5.0	1.6	0.3	2.3	0.9	13.0	13.0	4.5
REW	0.4	2.5	1.0	0.3	2.7	1.0	0	0	0.5	2.9	5.0	1.4	0.3	2.4	0.9	13.1	13.1	4.6
REF. NO.	Q6507			Q6508			Q6509			Q6510			Q6511			Q6512		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	13.1	0	0.8	13.1	0.6	12.2	12.2	11.4	12.2	0	12.2	1.4	1.4	0.9	0	1.4	1.4
PLAY	0	9.9	0	0.9	9.9	0.7	12.2	12.2	11.4	12.2	0	12.2	1.6	0.9	1.7	1.6	0.9	1.8
REC	0	9.8	0	0.9	9.8	0.8	12.1	12.0	11.4	12.0	11.9	11.3	1.5	1.0	1.7	1.6	1.0	1.8
F.F.	0	13.0	0	0.8	13.0	0.6	12.2	12.2	11.4	12.2	0	12.2	1.4	1.0	1.5	1.4	1.0	1.7
REW	0	13.1	0	0.8	13.1	0.6	12.2	12.2	11.4	12.2	0	12.2	1.7	0.7	1.9	1.7	0.7	1.7
REF. NO.	QR6501			QR6502			QR6503			QR6507			QR6508			QR6509		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
PLAY	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.7	4.4
REC	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	5.0	0	0	4.9	5.0	0.6	4.4
F.F.	0	0	5.0	0	0	5.0	0	0	5.0	5.0	0	5.0	0	0	0	5.0	0.6	4.4
REW	0	0	5.0	0	0	5.0	0	0	4.5	5.0	0	0	0	0	4.9	5.0	0.6	4.4
REF. NO.	QR6510			QR6511														
MODE	E	C	B	E	C	B												
STOP	5.0	4.8	0	0	12.2	0												
PLAY	5.0	4.8	0	0	12.2	0												
REC	5.0	4.9	0	0	0	5.0												
F.F.	5.0	4.8	0	0	12.2	0												
REW	5.0	4.8	0	0	12.2	0												

3-7 SERVO & SYSTEM CONTROL C.B.A. (VEP06461A), SUB SERVO C.B.A. (VEP02319A) & CYLINDER DRIVE C.B.A. (VEP00K62A)



TO DEW SENSOR
P1505
P1504
TO MODE SW
MECHANISM CONNECTION C.B.A. (VEK3583)
TO SOLENOID
LED C.B.A. (VXA2689)
IC1501
P1506
REEL SENSOR C.B.A. (VEK3555)
TO SAFETY TAB SW
PHOTO Tr. (S) C.B.A. (VEK3578)
P1507
Q1501
C1501
P1508
TO CASSETTE SW
R1503
Q1502
C1502
PHOTO Tr. (T) C.B.A. (VEK3577)
TO CHASSIS
JG
SUB SERVO C.B.A. (VEP02319A)
Q207
X201
L202
TP GND
IC6503
IC6505
IC6504
IC6502
IC6501
P6507
JP6508
JP6501
JP6503
JP6504
JP6502
SERVO & SYSTEM CONTROL C.B.A. (VEP
E
D
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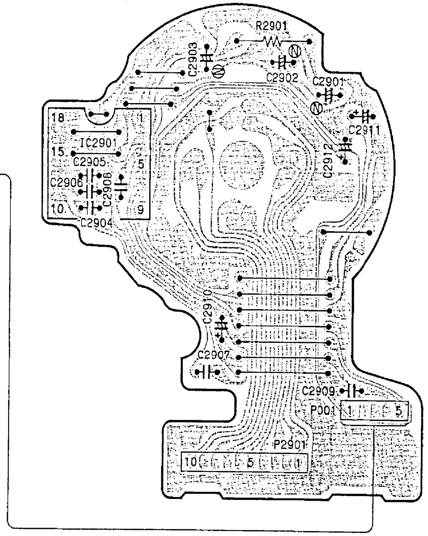
CYLINDER DRIVE C.B.A. (VEP00K62A)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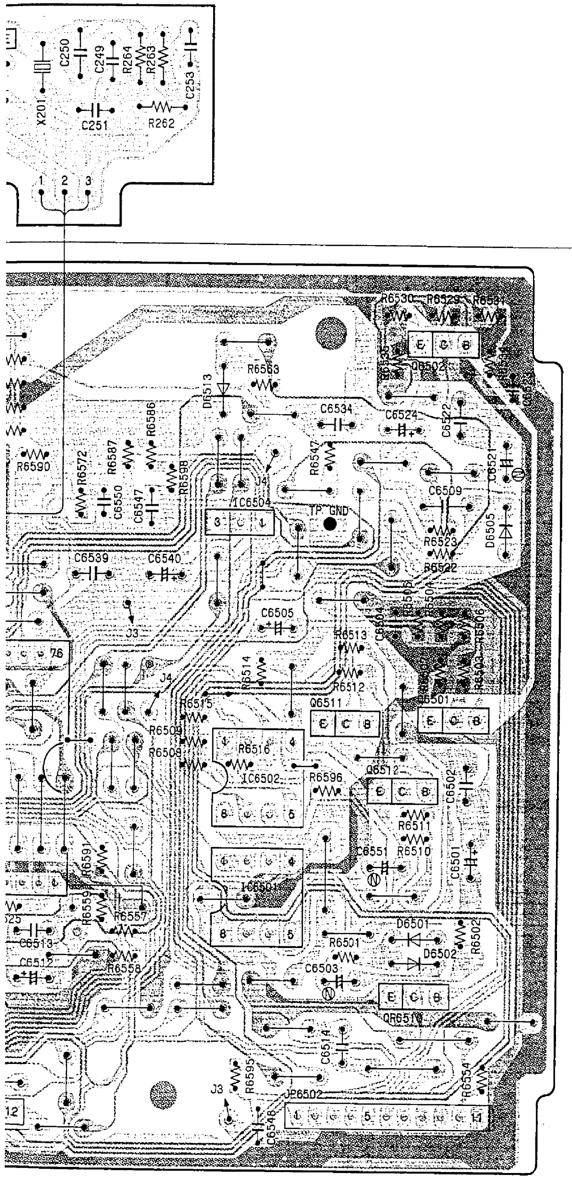
P2901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C6534
C6524
C6522
C6521
R6586
R6587
R6590
R6572
R6598
C6550
C6547
R6547
J4
IC6504
TP GND
C6509
R6523
R6522
D6505
C6539
C6540
J3
C6505
R6513
R6514
R6512
R6515
Q6511
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D6502
R6501
R6502
C6503
QR6510
C6514
R6595
R6534
JP6502
C6548
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11

SERVO & SYSTEM CONTROL C.B.A. (VEP06461A)

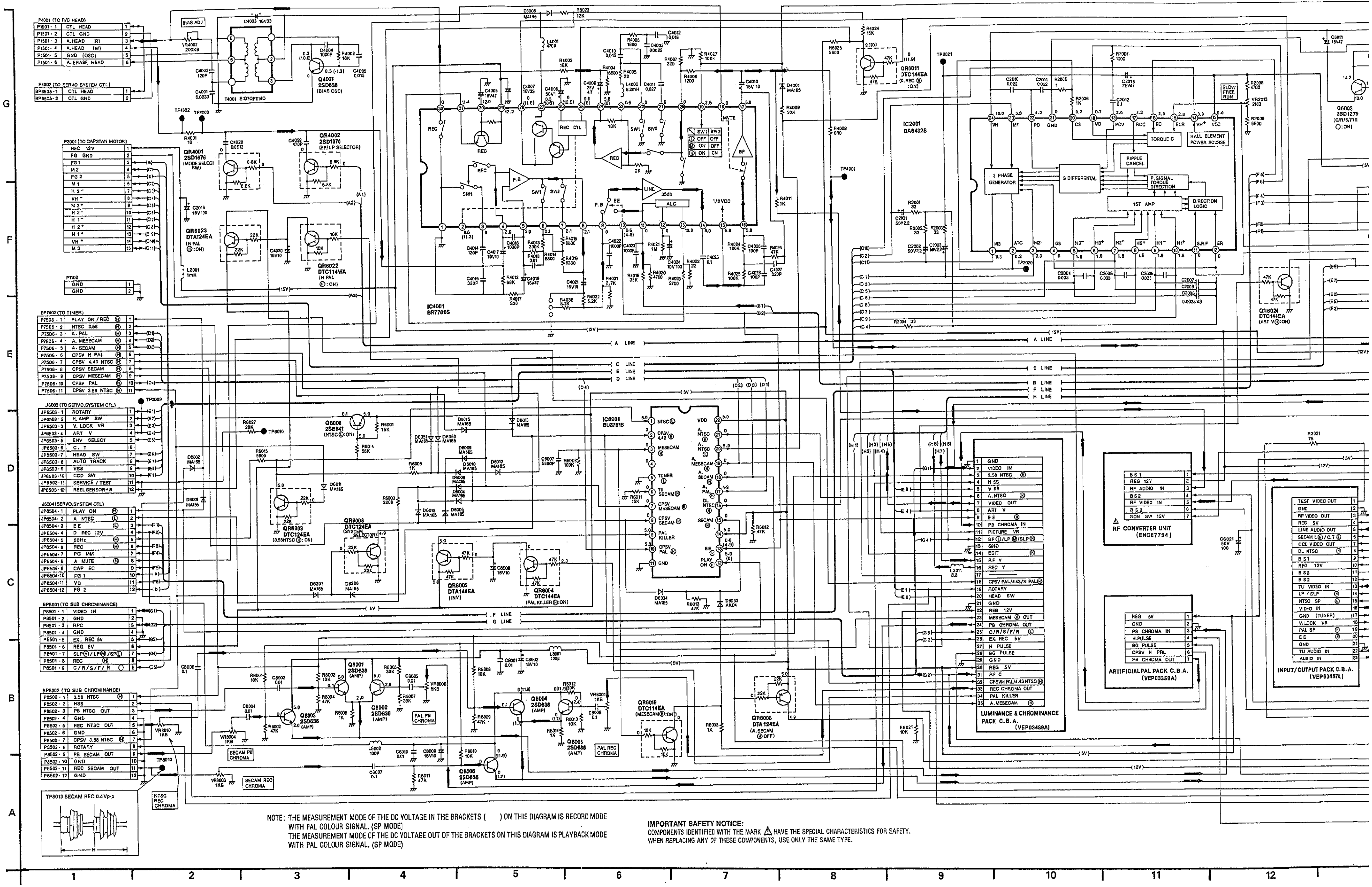
SERVO & SYSTEM CONTROL C.B.A.	
Transistor	
Q207	E-7
Q1501	A-1
Q1502	A-2
Q6501	C-9
Q6502	D-9
Q6506	D-6
Q6507	D-6
Q6508	D-5
Q6509	B-3
Q6510	B-3
Q6511	C-9
Q6512	B-9
Transistor & Resistor	
QR6501	C-4
QR6503	B-4
QR6507	C-6
QR6508	D-5
QR6509	C-5
QR6510	B-9
QR6511	C-3
QR6512	B-5
Integrated Circuit	
IC1501	C-2
IC2901	E-10
IC6501	B-8
IC6502	C-8
IC6503	C-6
IC6504	B-9
IC6505	D-3
Test Point	
TP GND	D-8
Connector	
BP6505	B-6
JP6501	A-3
JP6502	A-8
JP6503	A-5
JP6504	A-7
JP6506	B-6
JP6508	D-6
P001	D-11
P1504	E-2
P1505	E-2
P1506	C-1
P1507	A-1
P1508	B-2
P2901	D-11
P6507	D-5

ADDRESS INFORMATION

3-8 MAIN SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

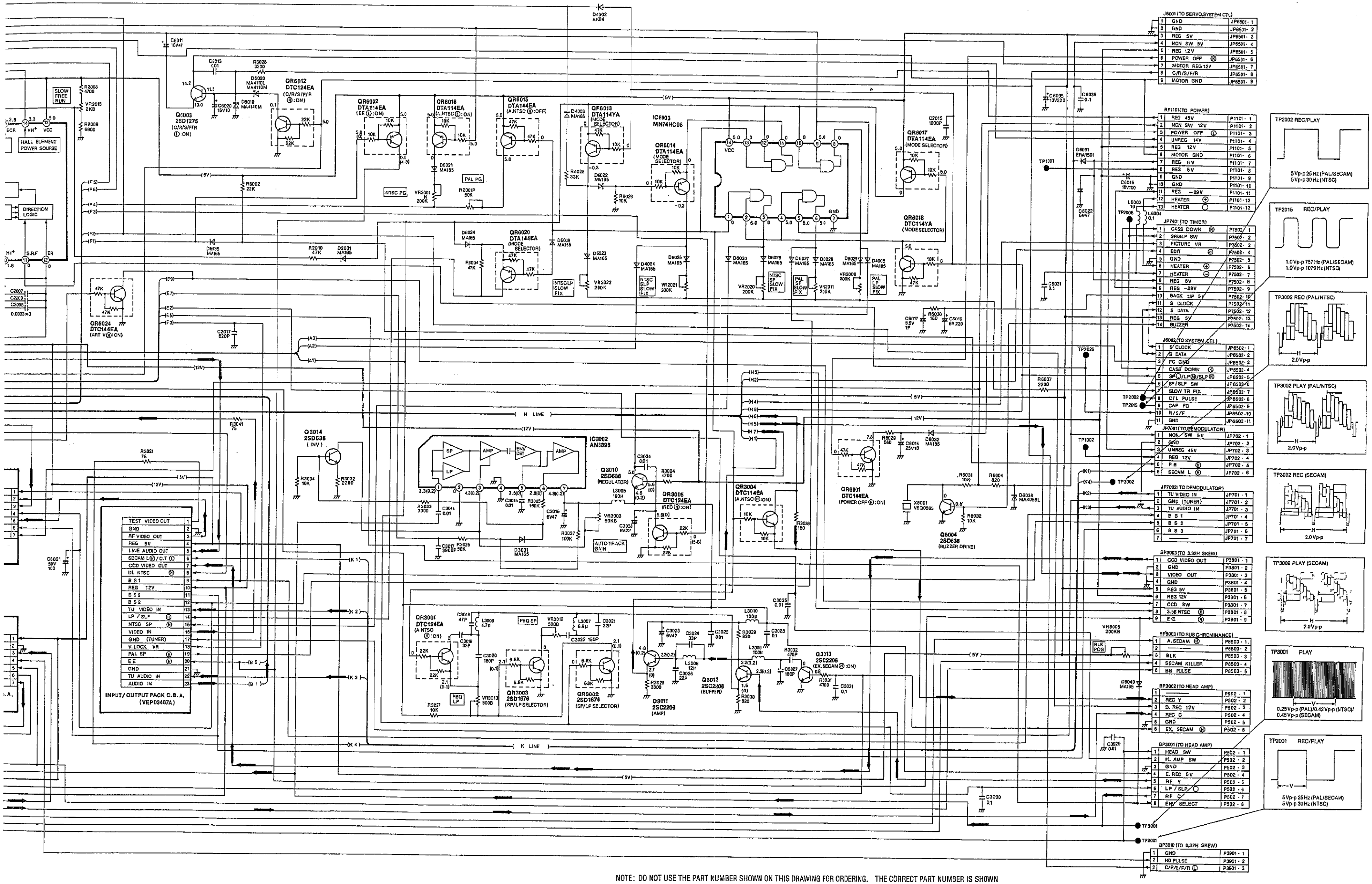
MAIN SIGNAL PATH IN PLAYBACK MODE


P4001 (TO R/C HEAD)
P4002 (TO SERVO SYSTEM CTL)
P2001 (TO CAPSTAN MOTOR)
P1102
BP7402 (TO TIMER)
J6003 (TO SERVO,SYSTEM CTL)
J6004 (SERVO,SYSTEM CTL)
BP8001 (TO SUB CHROMINANCE)
BP8002 (TO SUB CHROMINANCE)
TP6013 SECAM REC 0.4Vp-p
BIAS ADJ
Q4001 2SD638 (BIAS OSC)
T4001 EI070FD14Q
QR4001 2SD1676 (MODE SELECT SW)
QR4002 2SD1676 (SP/LP SELECTOR)
QR6023 DTA124EA
QR6022 DTC114WA
IC4001 BR7786S
IC2001 BA6432S
3 PHASE GENERATOR
3 DIFFERENTIAL
RIPPLE CANCEL
TORQUE C
HALL ELEMENT POWER SOURSE
1ST AMP
DIRECTION LOGIC
SLOW FREE RUN
Q6003 2SD1275 (C/R/S/F/R Ⓞ:ON)
QR6011 DTC144EA
QR6024 DTC144EA (ART V Ⓞ:ON)
IC6001 BU3781S
Q6008 2SB641
QR6003 DTC124EA
QR6005 DTA144EA (INV)
QR6004 DTC144EA (PAL KILLER Ⓞ:ON)
Q8001 2SD638 (AMP)
Q8002 2SD638 (AMP)
Q8003 2SD638 (AMP)
Q8004 2SD638 (AMP)
Q8005 2SD638 (AMP)
Q8006 2SD638 (AMP)
QR6019 DTC114EA
QR6006 DTA124EA
A LINE
C LINE
E LINE
D LINE
B LINE
F LINE
H LINE
G LINE
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489A)
RF CONVERTER UNIT (ENC87794)
ARTIFICIALPAL PACK C.B.A. (VEP03358A)
INPUT/OUTPUT PACK C.B.A. (VEP03487A)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
SERVO & SYSTEM CONTROL Section


J6001 (TO SERVO/SYSTEM CTL)
GND
REG 5V
NON SW 5V
REG 12V
POWER OFF
MOTOR REG 12V
C/R/S/F/R
MOTOR GND
BP1101 (TO POWER)
REG 45V
NON SW 12V
UNREG 14V
MOTOR GND
REG 6V
REG −29V
HEATER
JP7401 (TO TIMER)
CASS DOWN
SP/SLP SW
PICTURE VR
EDIT
BACK UP 5V
S CLOCK
S DATA
BUZZER
J6002 (TO SYSTEM CTL)
FC GND
SLOW TR FIX
CTL PULSE
CAP FG
R/S/F
JP7001 (TO DEMODULATOR)
P.B
SECAM L
JP7002 (TO DEMODULATOR)
TU VIDEO IN
GND (TUNER)
TU AUDIO IN
B S 1
B S 2
B S 3
BP3003 (TO 0.32H SKEW)
CCD VIDEO OUT
VIDEO OUT
CCD SW
3.58 NTSC
E-E
BP6003 (TO SUB CHROMINANCE)
A.SECAM
BLK
SECAM KILLER
BG PULSE
BP3002 (TO HEAD AMP)
REC Y
D. REC 12V
REC C
EX. SECAM
BP3001 (TO HEAD AMP)
HEAD SW
H. AMP SW
E. REC 5V
RF Y
LP / SLP
RF C
EXT SELECT
BP3010 (TO 0.32H SKEW)
HD PULSE
TP2002 REC/PLAY
5Vp-p 25Hz (PAL/SECAM)
5Vp-p 30Hz (NTSC)
TP2015 REC/PLAY
1.0Vp-p 757Hz (PAL/SECAM)
1.0Vp-p 1079Hz (NTSC)
TP3002 REC (PAL/NTSC)
2.0Vp-p
TP3002 PLAY (PAL/NTSC)
TP3002 REC (SECAM)
TP3002 PLAY (SECAM)
TP3001 PLAY
0.25Vp-p (PAL)/0.42Vp-p (NTSC)/0.45Vp-p (SECAM)
TP2001 REC/PLAY
Q6003 2SD1275
QR6012 DTC124EA
QR6002 DTA114EA
QR6016 DTA114EA
QR6015 DTA144EA
QR6013 DTA114YA
IC6903 MN74HC08
QR6014 DTA114EA
QR6017 DTA114EA (MODE SELECTOR)
QR6018 DTC114YA (MODE SELECTOR)
QR6020 DTA144EA (MODE SELECTOR)
QR6024 DTC144EA
SLOW FREE RUN
HALL ELEMENT POWER SOURSE
DIRECTION LOGIC
H LINE
K LINE
Q3014 2SD636 (INV)
IC3002 AN3398
SP
LP
AMP
ENV DET
Q3010 2SD636 (REGULATOR)
QR3005 DTC124EA
QR3004 DTC114EA
AUTO TRACK GAIN
QR6001 DTC144EA (POWER OFF)
Q6004 2SD636 (BUZZER DRIVE)
X6001 VSQ0565
QR3001 DTC124EA
QR3003 2SD1676 (SP/LP SELECTOR)
QR3002 2SD1676 (SP/LP SELECTOR)
Q3011 2SC2206 (AMP)
Q3012 2SC2206 (BUFFER)
Q3013 2SC2206
INPUT/OUTPUT PACK C.B.A. (VEP03487A)
TEST VIDEO OUT
RF VIDEO OUT
LINE AUDIO OUT
SECAM L / C.T
CCD VIDEO OUT
DL NTSC
NTSC SP
V.LOCK VR
PAL SP
E E
AUDIO IN
NTSC PG
PAL PG
NTSC LP SLOW FIX
PAL LP SLOW FIX
BLK POS

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

12 13 14 15 16 17 18 19 20 21 22 23

MAIN (SYSTEM CONTROL Section) ICs DC VOLTAGE CHART (SP mode)

REF. NO. / MODE		IC6001																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PAL	REC	5.0	0	0	0	0	0	0	0	5.0	5.0	0	0	4.9	5.0	0	0	4.9	0	0	5.0
	PLAY	5.0	0	0	0	0	0	0	0	5.0	5.0	0	5.0	0.6	5.0	0	0	4.9	0	0	5.0
NTSC	REC	0.8	0	0	0	0	0	0	0	0	0	0	0	4.9	5.0	4.1	5.0	0	0	0	0
	PLAY	0.8	0	0	0	0	0	0	0	5.0	0	0	5.0	0.6	5.0	0	5.0	0	0	0	0
REF. NO.		IC6001																			
MODE		21	22																		
PAL	REC	0	5.0																		
	PLAY	0	5.0																		
NTSC	REC	4.9	5.0																		
	PLAY	4.9	5.0																		
REF. NO.		IC6003																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14						
PAL	REC	0	5.0	0	5.0	5.0	5.0	0	0	5.0	0.1	0	0.1	0	5.0						
	PLAY	0	5.0	0	5.0	5.0	5.0	0	0	5.0	0	0	0	0	5.0						
NTSC	REC	4.9	5.0	4.9	5.0	0	0	0	0	0	0.1	0	0.1	4.9	5.0						
	PLAY	4.9	5.0	4.9	5.0	0	0	0	0	0	0	0	0	4.9	5.0						

MAIN (SYSTEM CONTROL Section) TRANSISTORs DC VOLTAGE CHART (SP mode)

REF. NO. / MODE		Q6003			Q6004			Q6008											
MODE		E	C	B	E	C	B	E	C	B									
PAL	REC	10.0	14.2	11.2	0	0	0.8	5.0	0.1	5.0									
	PLAY	10.0	14.3	11.2	0	0	0.8	5.0	0.1	5.0									
NTSC	REC	0	0	0.8	0	0	0.8	5.0	4.9	4.4									
	PLAY	10.0	14.3	11.2	0	0	0.8	5.0	4.9	4.3									
REF. NO.		QR6001			QR6002			QR6003			QR6004			QR6005			QR6006		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PAL	REC	0	7.3	0	5.0	4.9	0	0	5.0	0	0	0	2.3	5.0	5.0	0	0	4.9	0
	PLAY	0	7.3	0	5.0	0.6	5.0	0	5.0	0	0	0	2.3	5.0	5.0	0	0	4.9	0
NTSC	REC	0	7.3	0	5.0	4.9	0	0	0	4.5	0	5.0	0	5.0	0	5.0	0	0	4.5
	PLAY	0	7.1	0	5.0	0.6	5.0	0	0	4.5	0	0	2.3	5.0	5.0	0	0	0	4.5
REF. NO.		QR6008			QR6011			QR6012			QR6013			QR6014			QR6015		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PAL	REC	5.0	4.9	0	0	0	11.9	0	0.1	5.0	0.1	−0.3	0	0	−0.3	0	5.0	5.0	0
	PLAY	5.0	4.9	0	0	9.9	0	0	0.1	5.0	0	−0.3	0	0	−0.3	0	5.0	5.0	0
NTSC	REC	5.0	4.9	0	0	0	11.9	0	0.1	5.0	0.1	−0.2	0	0	−0.2	0	5.0	3.0	4.9
	PLAY	5.0	4.9	0	0	9.9	0.4	0	0.1	5.0	0	−0.3	0	0	−0.3	0	5.0	3.0	4.9
REF. NO.		QR6016			QR6017			QR6018			QR6019								
MODE		E	C	B	E	C	B	E	C	B	E	C	B						
PAL	REC	5.0	0	5.0	5.0	0.1	5.0	0	5.0	0	0	0	0						
	PLAY	5.0	0	5.0	5.0	0	5.0	0	5.0	0	0	0	0						
NTSC	REC	5.1	5.0	0	5.0	0.1	5.0	0	5.0	0	0	4.2	0						
	PLAY	5.0	5.0	0	5.0	0	5.0	0	5.0	0	0	0	0						

MAIN (SERVO Section) IC DC VOLTAGE CHART (SP mode)

REF. NO.		IC2001																			
MODE	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PAL	REC	3.3	0.2	3.3	0	1.9	1.9	1.9	1.9	1.9	1.9	0	0	5.0	3.3	2.8	2.5	4.2	3.9	0.7	0.2
	PLAY	3.3	0.2	3.3	0	1.9	1.9	1.8	1.9	1.9	1.8	0	0	5.0	3.3	2.8	2.5	4.2	3.9	0.7	0.2
NTSC	REC	3.3	0.2	3.3	0	1.8	1.8	1.8	1.9	1.9	1.8	0	0	5.0	3.3	2.8	2.5	4.2	3.9	0.7	0.2
	PLAY	3.3	0.2	3.3	0	1.9	1.9	1.8	1.8	1.8	1.8	0	0	5.0	3.2	2.8	2.5	4.2	3.9	0.7	0.2
REF. NO.		IC2001																			
MODE	PIN	21	22	23	24																
PAL	REC	0	4.2	3.3	9.9																
	PLAY	0	4.2	3.3	10.0																
NTSC	REC	0	4.2	3.3	10.0																
	PLAY	0	4.2	3.3	9.9																

MAIN (LUMINANCE & CHROMINANCE Section) ICs DC VOLTAGE CHART (SP mode)

REF. NO.		IC302																			
MODE	PIN	1	2	3	4	5	6	7													
REC	PAL	0.2	0.1	0.2	0	0	0	0.2													
PLAY		3.3	0	4.3	0	3.5	2.8	4.8													
REC	SECAM	0.2	0.1	0.2	0	0	0	0.2													
PLAY		3.3	0	4.3	0	3.5	2.8	4.8													
REC	NTSC 4.43MHz	0.3	0.1	0.3	0	0	0	0.3													
PLAY		3.3	0	4.3	0	3.7	3.9	4.8													
PLAY	NTSC PB	3.3	0	4.3	0	3.8	3.9	4.8													

MAIN (LUMINANCE & CHROMINANCE Section) TRANSISTORs DC VOLTAGE CHART (SP mode)

REF. NO.		Q3010			Q3011			Q3012			Q3013								
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B						
REC	PAL	0.2	5.0	0	0	0.2	0.2	0	0.2	0.2	0	0	0.8						
PLAY		4.8	5.0	5.6	2.7	4.8	3.2	1.6	3.2	2.3	0	0	0.8						
REC	SECAM	0.2	5.0	0	0	0.2	0.2	0	0.2	0.2	0	0	0						
PLAY		4.8	5.0	5.6	2.7	4.8	3.2	1.6	3.2	2.3	0	0	0						
REC	NTSC 4.43MHz	0.3	5.0	0	0	0.3	0.3	0	0.3	0.3	0	0	0.8						
PLAY		4.8	5.0	5.6	2.7	4.8	3.2	1.6	3.2	2.3	0	0	0.8						
PLAY	NTSC PB	4.8	4.9	5.6	2.7	4.8	3.2	1.6	3.2	2.3	0	0	0.8						

REF. NO.		Q8001			Q8002			Q8003			Q8004			Q8005			Q8006		
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
REC	PAL	2.0	5.0	0.1	2.0	5.0	2.6	2.0	5.0	0	1.7	11.9	0.1	1.7	11.9	2.4	1.7	11.9	0
PLAY		2.0	5.0	0.1	2.0	5.0	2.6	2.0	5.0	0	0	0	0.1	0	0	0	0	0	0
REC	SECAM	3.3	5.0	0.1	3.3	5.0	2.8	3.3	5.0	3.9	3.3	11.9	0.1	3.3	11.9	2.4	3.3	11.9	3.9
PLAY		3.2	5.0	0.1	3.2	5.0	2.7	3.2	5.0	3.9	0.4	0.4	0.1	0.3	0.4	0.1	0.4	0.4	1.0
REC	NTSC 4.43MHz	2.0	5.0	0.1	2.0	5.0	2.6	2.0	5.0	0	1.7	11.9	0.1	1.7	11.9	2.3	1.7	11.9	0
PLAY		2.0	5.0	0.1	2.0	5.0	2.6	2.0	5.0	0	0	0	0.1	0	0	0	0	0	0
PLAY	NTSC PB	2.0	5.0	0.1	2.0	5.0	2.6	2.0	5.0	0	0	0	0.1	0	0	0.	0	0	0

REF. NO.		QR3001			QR3002			QR3003			QR3004			QR3005					
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
REC	PAL	0.1	0.1	0	0	0.1	0.1	0	0.1	0.1	3.0	3.3	0	0	0	5.6			
PLAY		2.1	0	0	0	2.1	0	0	0	2.1	3.4	3.7	0	0	5.6	0			
REC	SECAM	0.1	0.1	0	0	0.1	0.1	0	0.1	0.1	3.0	3.3	0	0	0	5.0			
PLAY		2.1	0	0	0	2.1	0	0	0	2.1	3.4	3.7	0	0	5.6	0			
REC	NTSC 4.43MHz	0.8	2.5	4.9	0	0.8	0.1	0	0	0.8	3.3	3.3	4.9	0	0	5.0			
PLAY		2.7	3.4	5.0	0	2.7	0	0	0	2.7	3.6	3.7	4.9	0	5.6	0			
PLAY	NTSC PB	2.7	3.4	4.9	0	2.7	0	0	0	2.7	3.6	3.7	4.9	0	5.6	0			

MAIN C.B.A.

Transistor

Q3010	C-6
Q3011	D-6
Q3012	D-6
Q3013	A-6
Q3014	C-6
Q4001	D-3
Q6003	A-8
Q6004	D-1
Q6008	A-2
Q8001	B-4
Q8002	C-4
Q8003	B-5
Q8004	C-4
Q8005	C-5
Q8006	C-5

Transistor & Resistor

QR3001	D-6
QR3002	C-6
QR3003	C-6
QR3004	B-6
QR3005	B-6
QR4001	E-5
QR4002	E-4
QR6001	B-6
QR6002	B-3
QR6003	C-3
QR6004	C-2
QR6005	C-3
QR6006	C-4
QR6008	B-6
QR6011	C-2
QR6012	A-7
QR6013	C-2
QR6014	C-1
QR6015	C-1
QR6016	C-1
QR6017	C-2
QR6018	C-1
QR6019	C-3
QR6020	B-7
QR6022	A-3
QR6023	A-3
QR6024	F-6

Integrated Circuit

IC2001	D-2
IC3002	C-6
IC4001	D-4
IC6001	C-2
IC6003	C-1

Test Point

TP1001	A-7
TP1002	F-7
TP2001	B-4
TP2002	B-1
TP2008	B-2
TP2009	B-4
TP2015	B-1
TP2020	D-3
TP2021	D-2
TP2026	D-2
TP3001	C-6
TP3002	F-7
TP4001	F-7
TP4002	D-4
TP4003	D-4
TP6010	B-3
TP8013	C-5
TP GND	B-3

Adjustment

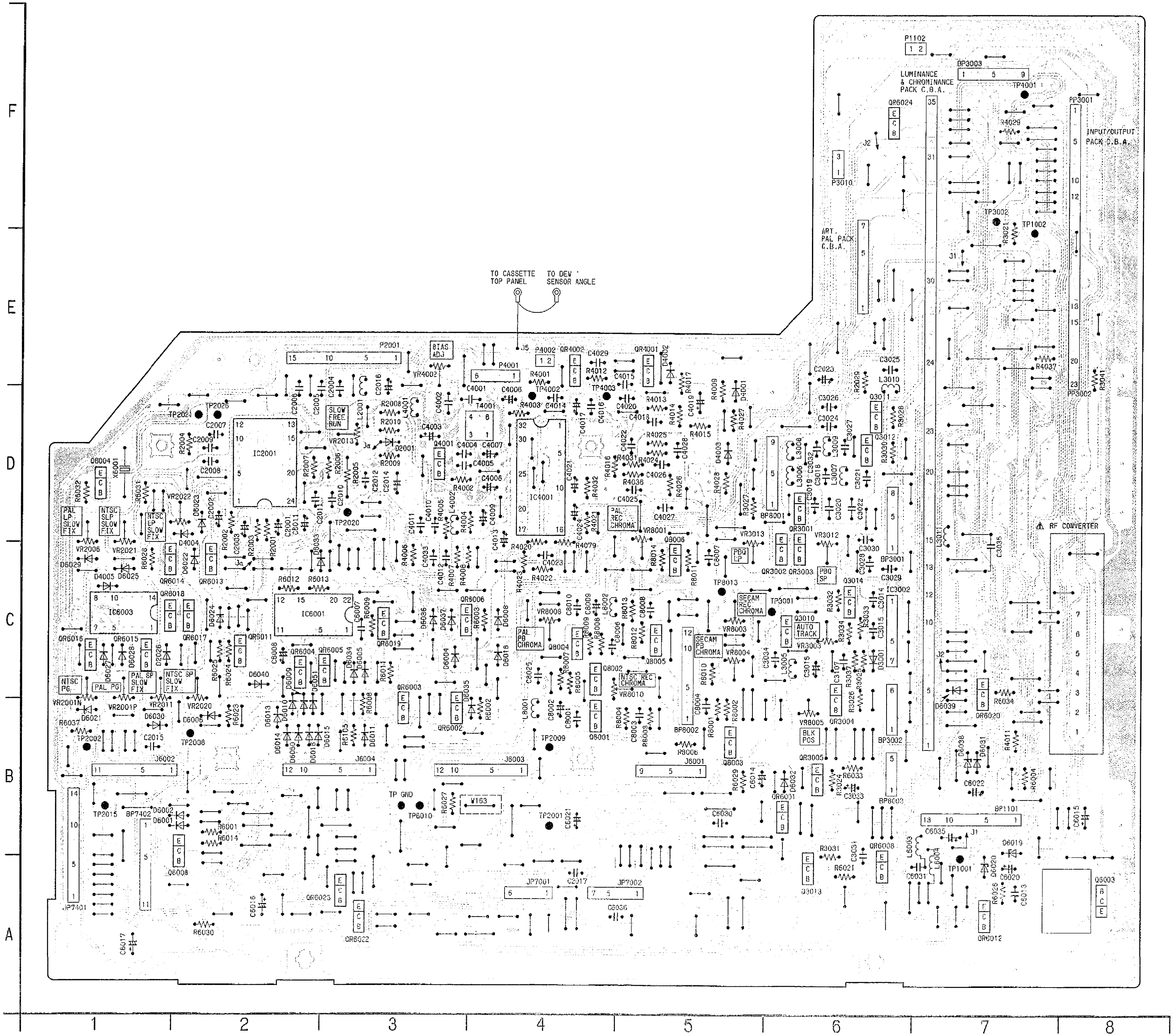
VR2001 N	B-1
VR2001 P	B-1
VR2006	C-1
VR2011	B-1
VR2013	D-3
VR2020	B-2
VR2021	C-1
VR2022	D-2
VR3003	C-6
VR3012	D-6
VR3013	D-5
VR4002	E-3
VR8001	D-5
VR8003	C-5
VR8004	C-5
VR8005	B-6
VR8008	C-4
VR8010	C-5

Connector

BP1101	B-7
BP3001	C-6
BP3002	B-6
BP3003	F-7
BP7401	A-1
BP7402	B-1
BP8001	D-6
BP8002	B-5
BP8003	B-6
J6001	B-5
J6002	B-1
J6003	B-4
J6004	B-3
P1102	F-6
P2001	E-3
P3010	F-6
P4001	E-4
P4002	E-4
PJ7001	A-4
PJ7002	A-5
PP3001	F-8
PP3002	D-8

ADDRESS INFORMATION

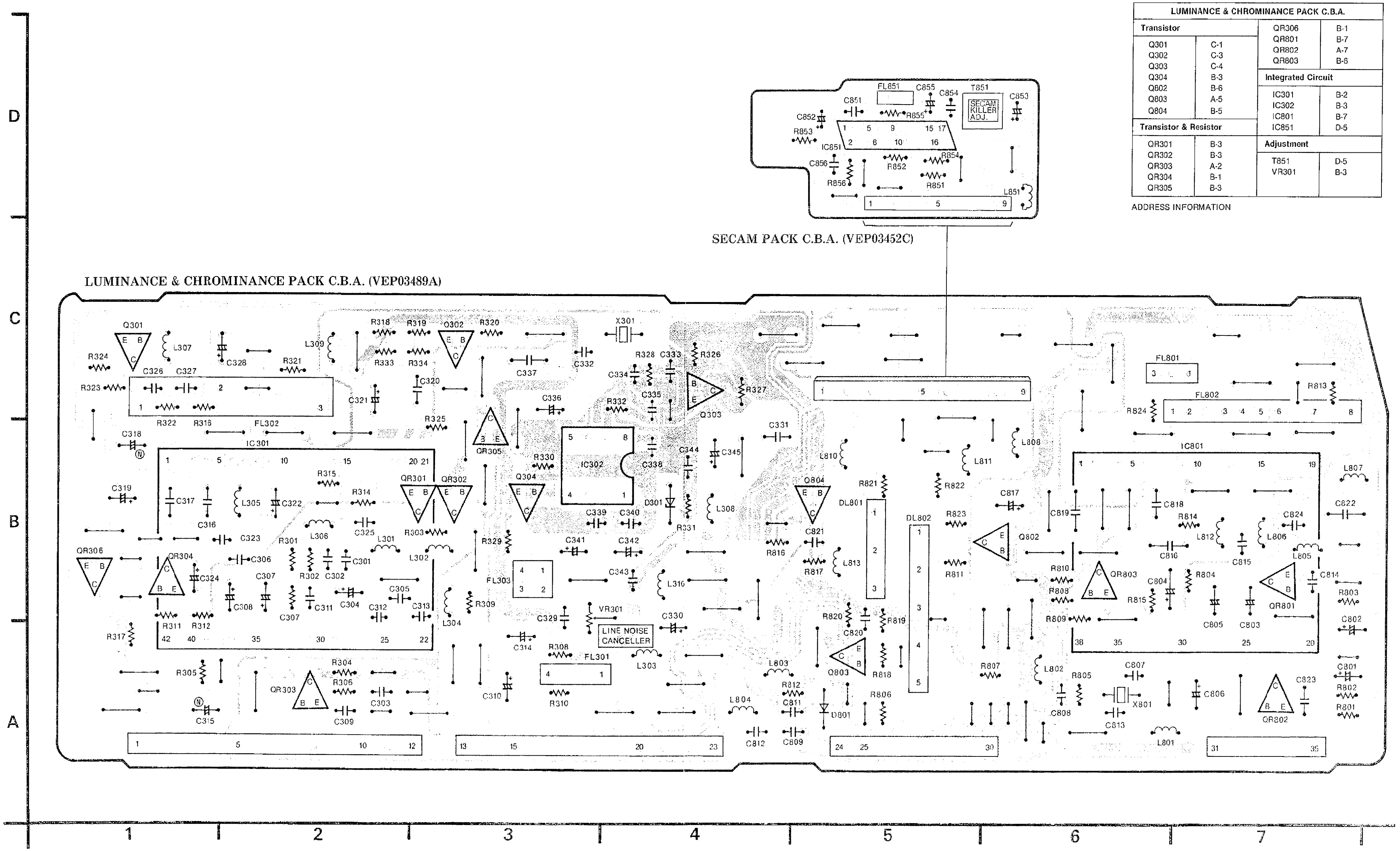
3-9. MAIN C.B.A. (VEP03486A)


F
E
D
C
B
A
1
2
3
4
5
6
7
8
LUMINANCE & CHROMINANCE PACK C.B.A.
INPUT/OUTPUT PACK C.B.A.
ART. PAL PACK C.B.A.
RF CONVERTER
TO CASSETTE TOP PANEL
TO DEW SENSOR ANGLE
P1102
BP3003
PP3001
PP3002
TP4001
TP3002
TP1002
P2001
BIAS ADJ
P4001
P4002
IC2001
IC4001
IC6001
IC6003
SLOW FREE RUN
PAL LP SLOW FIX
NTSC SLP SLOW FIX
NTSC LP SLOW FIX
NTSC PG
PAL PG
PAL SP SLOW FIX
NTSC SP SLOW FIX
PAL REC CHROMA
PAL PB CHROMA
SECAM REC CHROMA
SECAM PB CHROMA
NTSC REC CHROMA
PBG LP
PBG SP
AUTO TRACK
BLK PCS
BP8001
BP3001
BP3002
BP6002
BP8002
BP1101
BP7402
J6002
J6004
J6003
J6001
JP7401
JP7001
JP7002
TP GND
TP6010
TP2001
TP2002
TP2009
TP2015
TP2020
TP2021
TP2026
TP2008
TP8013
TP3001
TP1001
TP4002
TP4003
L3001
IC3002
QR6012
Q6003

3-10. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489A)

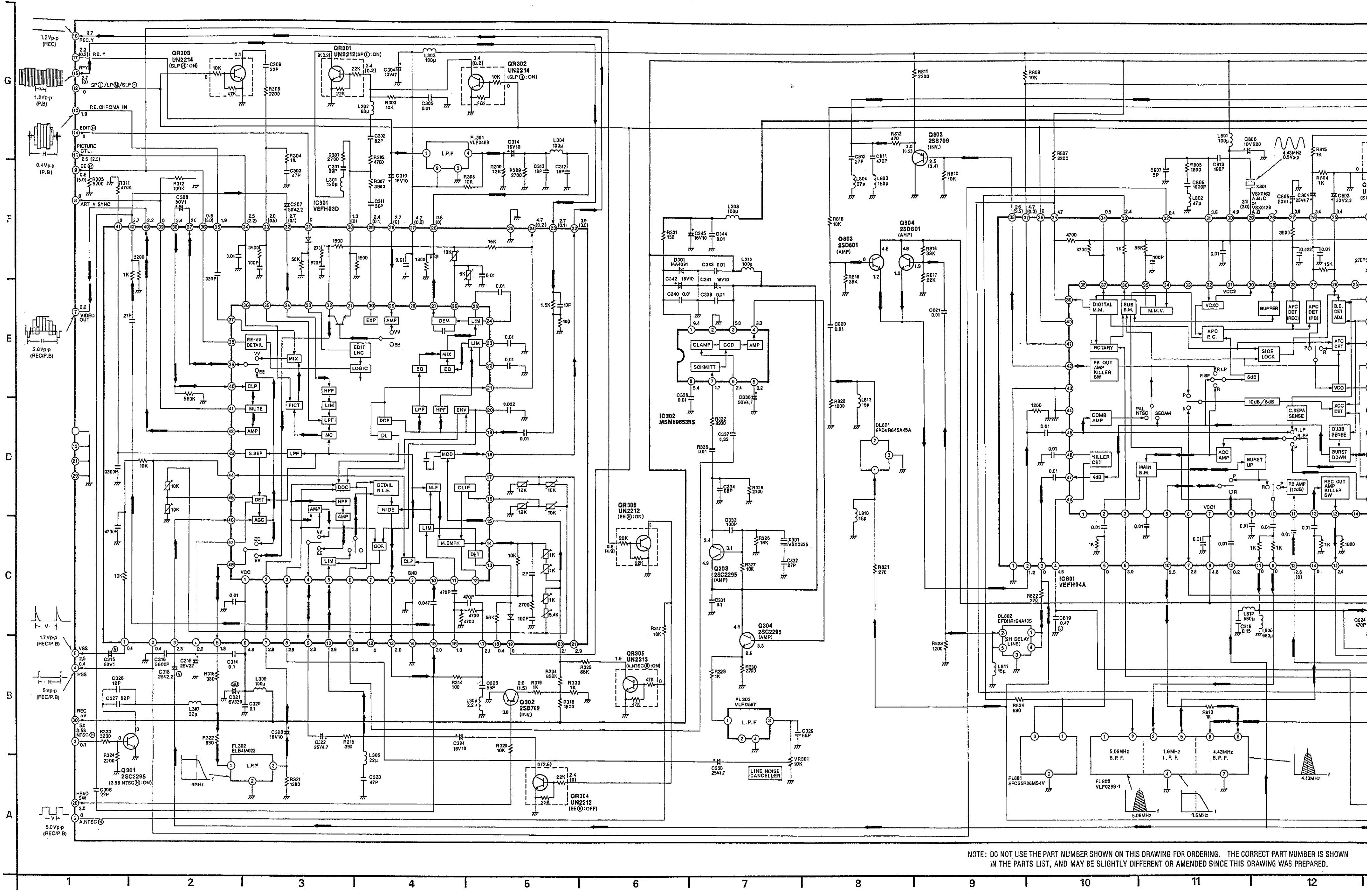
LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		QR306	B-1
Q301	C-1	QR801	B-7
Q302	C-3	QR802	A-7
Q303	C-4	QR803	B-6
Q304	B-3	**Integrated Circuit**	
Q802	B-6	IC301	B-2
Q803	A-5	IC302	B-3
Q804	B-5	IC801	B-7
Transistor & Resistor		IC851	D-5
QR301	B-3	**Adjustment**	
QR302	B-3	T851	D-5
QR303	A-2	VR301	B-3
QR304	B-1		
QR305	B-3		

ADDRESS INFORMATION


SECAM PACK C.B.A. (VEP03452C)
SECAM KILLER ADJ.
T851
IC851
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489A)
IC301
IC302
IC801
LINE NOISE CANCELLER
VR301
X301
X801
FL301
FL302
FL303
FL801
FL802
DL801
DL802
D
C
B
A
1
2
3
4
5
6
7

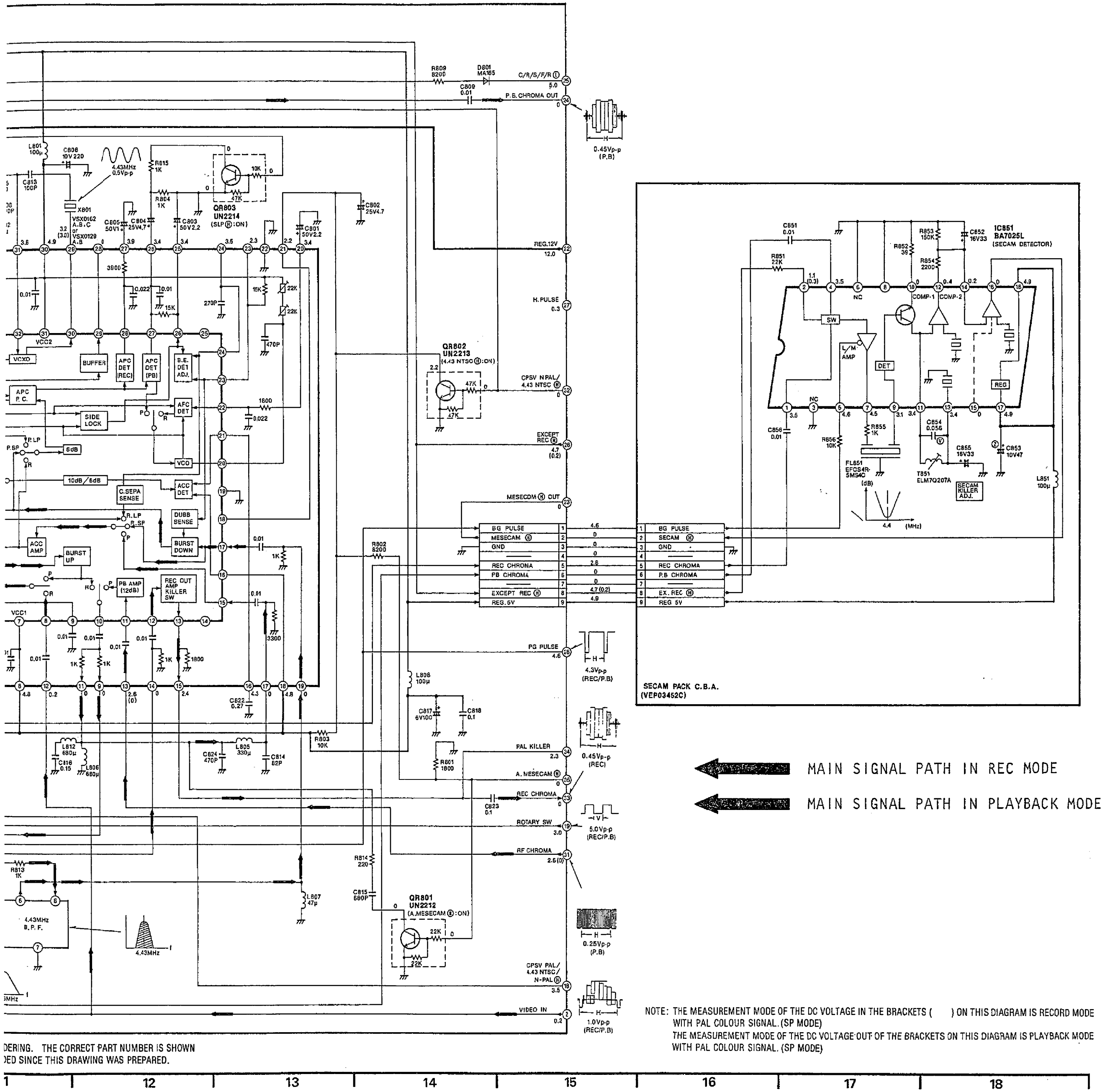
Back Page:
MAIN Section

3-11. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM



QR303 UN2214 (SLP Ⓗ:ON)
QR301 UN2212(SP Ⓛ:ON)
QR302 UN2214 (SLP Ⓗ:ON)
IC301 VEFH03D
FL301 VLF0499
L.P.F
QR306 UN2212 (EE Ⓗ:ON)
QR305 UN2213 (A.NTSC Ⓗ:ON)
QR304 UN2212 (EE Ⓗ:OFF)
Q301 2SC2295 (3.58 NTSC Ⓗ:ON)
Q302 2SB709 (INV.)
FL302 ELB4M022
IC302 MSM6953RS
CLAMP
CCD
AMP
SCHMITT
Q303 2SC2295 (AMP)
Q304 2SC2295 (AMP)
FL303 VLF0567
LINE NOISE CANCELLER
X301 VSX0225
VR301 10K
Q802 2SB709 (INV.)
Q803 2SD601 (AMP)
Q804 2SD601 (AMP)
DL801 EFDVR645A45A
DL802 EFDHR124A135 (2H DELAY LINE)
IC801 VEFH04A
FL801 EFCS5R06MS4V
FL802 VLF0299-1
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
X801 VSX0162 A-B-C or VSX0129 A-B
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
AFC DET
APC P.C.
SIDE LOCK
ROTARY
PB OUT AMP KILLER SW
COMB AMP
KILLER DET
MAIN B.M.
ACC AMP
BURST UP
PB AMP (12dB)
REC OUT AMP KILLER SW
C.SEPA SENSE
ACC DET
DUBB SENSE
BURST DOWN
VCO
6dB
10dB/6dB
4dB
PAL NTSC SECAM
EE·VV DETAIL
MIX
EDIT LNC
LOGIC
CLP
MUTE
AMP
PICT
HPF
LIM
LPF
NC
S.SEP
DET
AGC
DOC
DETAIL N.L.E.
NLE
CLIP
NLDE
COR
M.EMPH
EXP
DEM
EQ
DOP
DL
MOD
ENV
1.2Vp-p (REC)
1.2Vp-p (P.B)
0.4Vp-p (P.B)
2.0Vp-p (REC/P.B)
1.7Vp-p (REC/P.B)
5Vp-p (REC/P.B)
5.0Vp-p (REC/P.B)
REC.Y
P.B. Y
RFY
SP Ⓛ/LP Ⓗ/SLP Ⓗ
P.B.CHROMA IN
EDIT Ⓗ
PICTURE CTL.
EE Ⓗ
ART. V SYNC
VIDEO OUT
VSS
HSS
REG 5V
3.58 NTSC Ⓗ
HEAD SW
A.NTSC Ⓗ
4.43MHz 0.5Vp-p
4MHz
5.06MHz
1.6MHz
4.43MHz
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

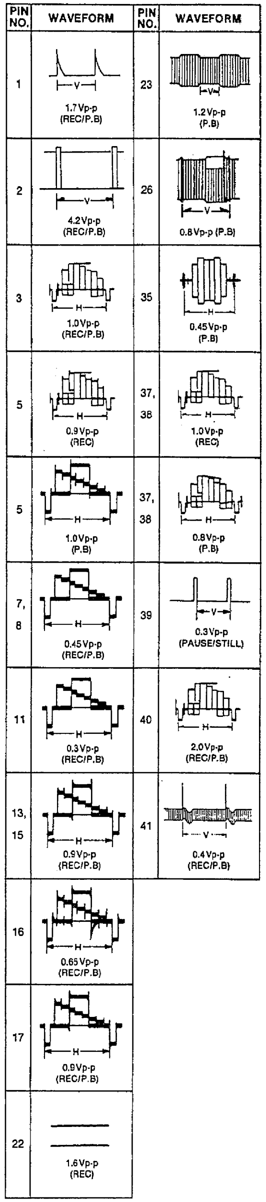
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


R809 8200
D801 MA165
C/R/S/F/R Ⓛ
C809 0.01
P.B. CHROMA OUT
0.45Vp-p (P.B)
L801 100μ
C806 10V220
4.43MHz 0.5Vp-p
C813 100P
R815 1K
QR803 UN2214 (SLP Ⓓ:ON)
X801 VSX0162 A.B.C or VSX0129 A.B
C805 50V1
C804 25V4.7
C803 50V2.2
C801 50V2.2
C802 25V4.7
REG.12V
H.PULSE
VCC2
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
APC P.C.
SIDE LOCK
AFC DET
VCO
10dB/6dB
6dB
C.SEPA SENSE
ACC DET
ACC AMP
BURST UP
DUBB SENSE
BURST DOWN
PB AMP (12dB)
REC OUT AMP KILLER SW
VCC1
QR802 UN2213 (4.43 NTSC Ⓗ:ON)
CPSV N-PAL/ 4.43 NTSC Ⓗ
EXCEPT REC Ⓗ
MESECOM Ⓗ OUT
BG PULSE
MESECAM Ⓗ
GND
REC CHROMA
PB CHROMA
EXCEPT REC Ⓗ
REG.5V
R802 8200
PG PULSE
4.3Vp-p (REC/P.B)
L808 100μ
C817 6V100
C818 0.1
R803 10K
PAL KILLER
0.45Vp-p (REC)
R801 1800
A. MESECAM Ⓗ
REC CHROMA
C823 0.1
ROTARY SW
5.0Vp-p (REC/P.B)
RF CHROMA
R814 220
C815 680P
QR801 UN2212 (A.MESECAM Ⓗ:ON)
0.25Vp-p (P.B)
CPSV PAL/ 4.43 NTSC/ N-PAL Ⓗ
VIDEO IN
1.0Vp-p (REC/P.B)
L812 680μ
C816 0.15
L806 680μ
C824 470P
L805 330μ
C814 82P
R813 1K
4.43MHz B.P.F.
4.43MHz
L807 47μ
C851 0.01
R851 22K
R852 39
R853 150K
R854 2200
C852 16V33
IC851 BA7025L (SECAM DETECTOR)
NC
SW
L/M AMP
DET
COMP-1
COMP-2
REG
C856 0.01
R856 10K
R855 1K
FL851 EFCS4R-5MS4C
C854 0.056
C855 16V33
T851 ELM7Q207A
SECAM KILLER ADJ.
C853 10V47
L851 100μ
(dB)
4.4
(MHz)
BG PULSE
SECAM Ⓗ
GND
REC CHROMA
P.B CHROMA
EX. REC Ⓗ
REG 5V
SECAM PACK C.B.A. (VEP03452C)
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
1
12
13
14
15
16
17
18

ERING. THE CORRECT PART NUMBER IS SHOWN
ED SINCE THIS DRAWING WAS PREPARED.

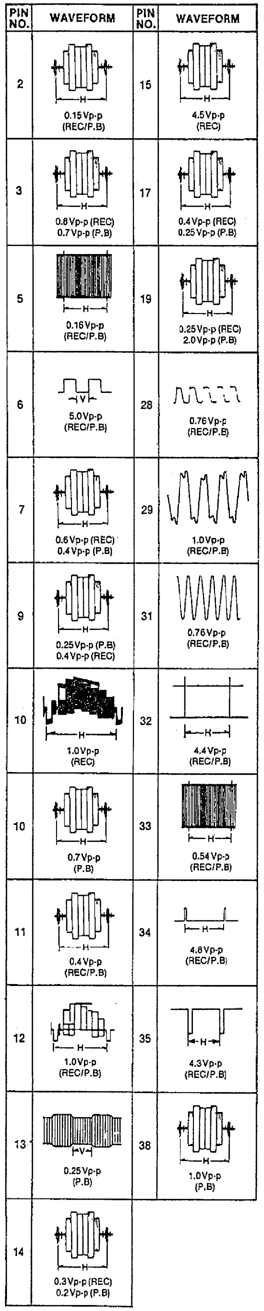
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

IC301 (VEFH03D)



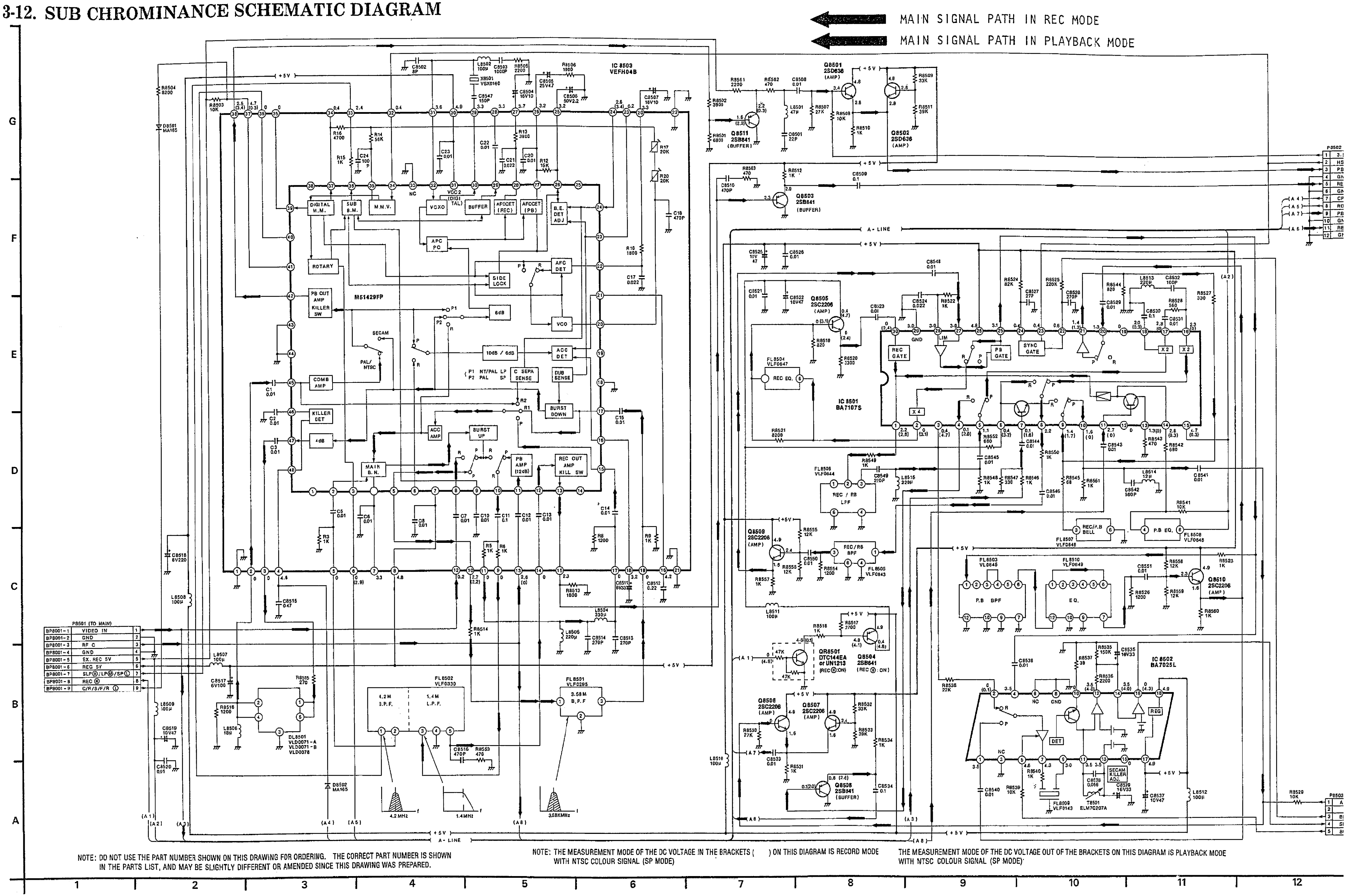
PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1	1.7Vp-p (REC/P.B)	23	1.2Vp-p (P.B)
2	4.2Vp-p (REC/P.B)	26	0.8Vp-p (P.B)
3	1.0Vp-p (REC/P.B)	35	0.45Vp-p (P.B)
5	0.9Vp-p (REC)	37, 38	1.0Vp-p (REC)
5	1.0Vp-p (P.B)	37, 38	0.8Vp-p (P.B)
7, 8	0.45Vp-p (REC/P.B)	39	0.3Vp-p (PAUSE/STILL)
11	0.3Vp-p (REC/P.B)	40	2.0Vp-p (REC/P.B)
13, 15	0.9Vp-p (REC/P.B)	41	0.4Vp-p (REC/P.B)
16	0.65Vp-p (REC/P.B)		
17	0.9Vp-p (REC/P.B)		
22	1.6Vp-p (REC)		

IC801 (VEFH04A)



PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	0.15Vp-p (REC/P.B)	15	4.5Vp-p (REC)
3	0.8Vp-p (REC) 0.7Vp-p (P.B)	17	0.4Vp-p (REC) 0.25Vp-p (P.B)
5	0.16Vp-p (REC/P.B)	19	0.25Vp-p (REC) 2.0Vp-p (P.B)
6	5.0Vp-p (REC/P.B)	28	0.76Vp-p (REC/P.B)
7	0.6Vp-p (REC) 0.4Vp-p (P.B)	29	1.0Vp-p (REC/P.B)
9	0.25Vp-p (P.B) 0.4Vp-p (REC)	31	0.76Vp-p (REC/P.B)
10	1.0Vp-p (REC)	32	4.4Vp-p (REC/P.B)
10	0.7Vp-p (P.B)	33	0.54Vp-p (REC/P.B)
11	0.4Vp-p (REC/P.B)	34	4.8Vp-p (REC/P.B)
12	1.0Vp-p (REC/P.B)	35	4.3Vp-p (REC/P.B)
13	0.25Vp-p (P.B)	38	1.0Vp-p (P.B)
14	0.3Vp-p (REC) 0.2Vp-p (P.B)		

3-12. SUB CHROMINANCE SCHEMATIC DIAGRAM

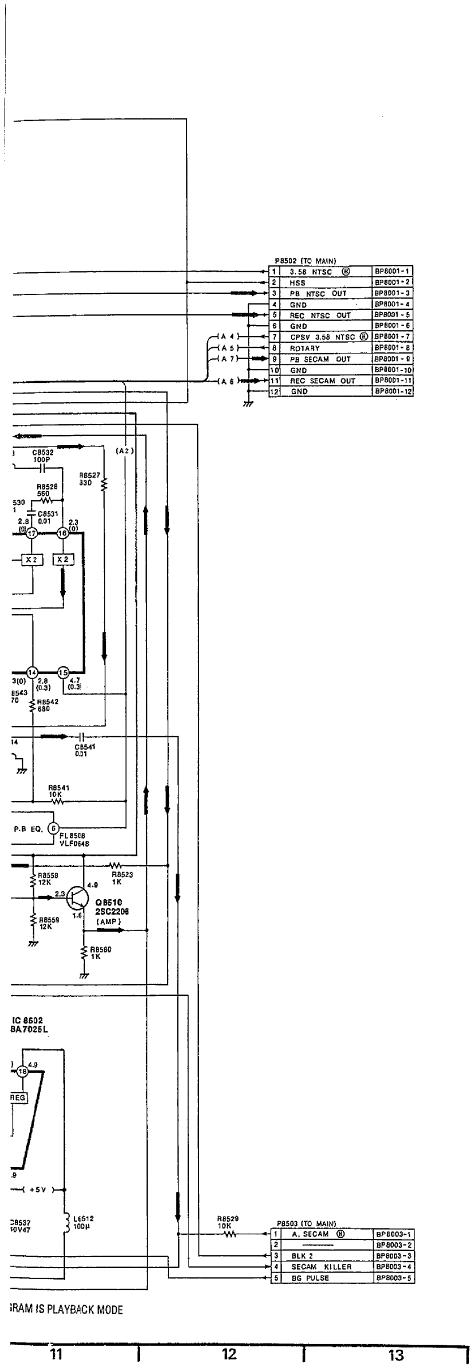

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
IC 8503 VEFH04B
M51429FP
IC 8501 BA7107S
IC 8502 BA7025L
Q8501 2SD636 (AMP)
Q8502 2SD636 (AMP)
Q8511 2SB641 (BUFFER)
Q8503 2SB641 (BUFFER)
Q8505 2SC2206 (AMP)
Q8509 2SC2206 (AMP)
Q8510 2SC2206 (AMP)
QR8501 DTC144EA or UN1213
Q8504 2SB641
Q8506 2SC2206 (AMP)
Q8507 2SC2206 (AMP)
Q8508 2SB641 (BUFFER)
PB501 (TO MAIN)
BP8001-1 VIDEO IN
BP8001-2 GND
BP8001-3 RF C
BP8001-4 GND
BP8001-5 EX. REC 5V
BP8001-6 REG 5V
BP8001-7 SLP(E)/LP(M)/SP(L)
BP8001-8 REC (R)
BP8001-9 C/R/S/F/R (L)
PB502
PB503
+5V
A-LINE
4.2MHz
1.4MHz
3.58MHz
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL (SP MODE)

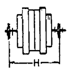
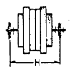
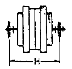
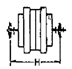
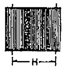
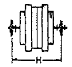
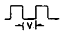
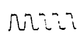
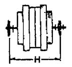
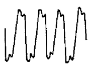
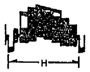
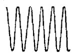
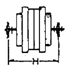
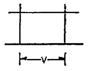
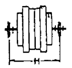
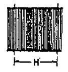
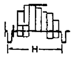
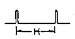
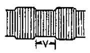
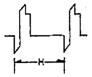
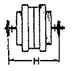
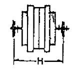
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL (SP MODE)

Back Page:
LUMINANCE & CHROMINANCE
PACK Section


P8502 (TO MAIN)
1 3.58 NTSC Ⓗ BP8001-1
2 HSS BP8001-2
3 PB NTSC OUT BP8001-3
4 GND BP8001-4
5 REC NTSC OUT BP8001-5
6 GND BP8001-6
7 CPSV 3.58 NTSC Ⓗ BP8001-7
8 ROTARY BP8001-8
9 PB SECAM OUT BP8001-9
10 GND BP8001-10
11 REC SECAM OUT BP8001-11
12 GND BP8001-12
(A 4)
(A 5)
(A 7)
(A 6)
(A 2)
C8532 100P
R8527 330
R8526 560
C8531 0.01
X 2
R8542 680
C8541 0.01
R8541 10K
P.B EQ.
FL8506 VLF04B
R8558 12K
R8523 1K
Q8510 2SC2208 (AMP)
R8559 12K
R8560 1K
IC 8602 BA7025L
REG
+5V
L8512 100µ
R8529 10K
P8503 (TO MAIN)
1 A, SECAM Ⓗ BP8003-1
2 ——— BP8003-2
3 BLK 2 BP8003-3
4 SECAM KILLER BP8003-4
5 BG PULSE BP8003-5
11
12
13

RAM IS PLAYBACK MODE

IC8503 (VEFH04B)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 0.25Vp-p (P.B)	15	 0.5Vp-p (REC)
3	 0.8Vp-p (REC) 0.9Vp-p (P.B)	17	 0.26Vp-p (REC) 0.2Vp-p (P.B)
5	 0.3Vp-p (REC/P.B)	19	 0.1Vp-p (REC) 0.2Vp-p (P.B)
6	 5.0Vp-p (REC/P.B)	28	 0.7Vp-p (REC/P.B)
9	 0.4Vp-p (REC)	29	 0.76Vp-p (REC/P.B)
10	 0.5Vp-p (REC)	31	 0.5Vp-p (REC/P.B)
10	 0.9Vp-p (P.B)	32	 4.4Vp-p (REC/P.B)
11	 0.4Vp-p (REC) 0.3Vp-p (P.B)	33	 0.8Vp-p (REC/P.B)
12	 0.5Vp-p (REC/P.B)	34	 5.0Vp-p (P.B)
13	 0.4Vp-p (P.B)	35	 0.28Vp-p (REC/P.B)
14	 0.3Vp-p (REC) 0.23Vp-p (P.B)	38	 1.0Vp-p (P.B)

SUB CHROMINANCE ICs DC VOLTAGE CHART (SP mode)

REF. NO.		IC8501																			
MODE	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	SECAM	2.8	3.1	4.7	2.0	1.1	3.7	1.6	2.2	1.7	0	0	0	0	0	0.2	0	0	0.2	0	1.1
PLAY		2.2	0	0.4	0.1	1.2	0.4	0.1	2.1	1.4	1.6	2.7	0	1.3	2.8	4.7	2.3	2.8	2.0	0	1.3
REC	NTSC 3.58MHz	2.8	3.1	4.7	2.0	1.1	3.7	1.6	2.2	1.7	0	0	0	0	0.3	0.3	0	0	0.3	0	1.1
PLAY		2.2	0	0.4	0.1	1.2	0.4	0.1	2.1	1.4	1.6	2.7	0	1.3	2.8	4.7	2.3	2.8	2.0	0	1.3
REF. NO.		IC8501																			
MODE	PIN	21	22	23	24	25	26	27	28	29	30										
REC	SECAM	1.2	0.7	0.3	0.4	3.3	4.9	3.0	3.0	0	2.4										
PLAY		1.4	0.7	0.3	0.4	3.1	4.8	3.0	3.0	0	0										
REC	NTSC 3.58MHz	1.2	0.6	0.4	0.4	3.1	4.9	3.0	3.0	0	2.4										
PLAY		1.4	0.6	0.4	0.4	3.1	4.8	3.0	3.0	0	0										
REF. NO.		IC8502																			
MODE	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
REC	SECAM	3.5	0	0	3.5	4.6	0	4.4	0	3.0	0	3.4	4.1	3.4	4.1	0	4.1	4.9	4.9		
PLAY		3.5	0.4	0	3.5	4.6	0	4.3	0	3.0	0	3.5	0	3.5	0	0	0	4.9	4.9		
REC	NTSC 3.58MHz	3.5	1.0	0	3.5	4.6	0	4.4	0	3.0	0	3.4	4.0	3.4	4.0	0	4.3	4.9	4.9		
PLAY		3.5	0	0	3.5	4.6	0	4.3	0	3.0	0	3.5	3.5	3.5	3.5	0	0	4.9	4.9		
REF. NO.		IC8503																			
MODE	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	SECAM	0	0	0	3.1	0	2.5	3.4	4.8	0	2.2	0	0.2	0	0	0	4.2	0	3.2	0	3.2
PLAY		0	0	0	3.3	0	2.5	3.3	4.8	0	2.8	0	0.2	2.6	0	2.3	4.2	0	3.3	0	3.3
REC	NTSC 3.58MHz	0	0	0	4.6	0	2.9	3.4	4.8	0	2.2	0	0.2	0	0	2.3	4.2	0	3.2	0	3.3
PLAY		0	0	0	4.6	0	0	3.3	4.8	0	2.7	0	0.2	2.6	0	2.3	4.2	0	3.2	0	3.3
REF. NO.		IC8503																			
MODE	PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
REC	SECAM	0	0	0	3.4	3.3	3.3	3.7	3.3	3.0	4.9	3.6	0.3	0	0.4	0	0	0.3	3.4		
PLAY		0	0	0.2	2.6	3.2	3.2	3.7	3.3	3.3	4.9	3.6	0.3	2.4	0.4	0	0	4.7	2.6		
REC	NTSC 3.58MHz	0	0	0.1	3.4	3.3	3.3	3.8	3.3	3.0	4.9	3.6	0.4	2.4	0.4	0	0	0.3	3.4		
PLAY		0	0	0.2	2.6	3.2	3.2	3.7	3.3	3.3	4.9	3.6	0.4	2.4	0.4	0	0	4.7	2.5		

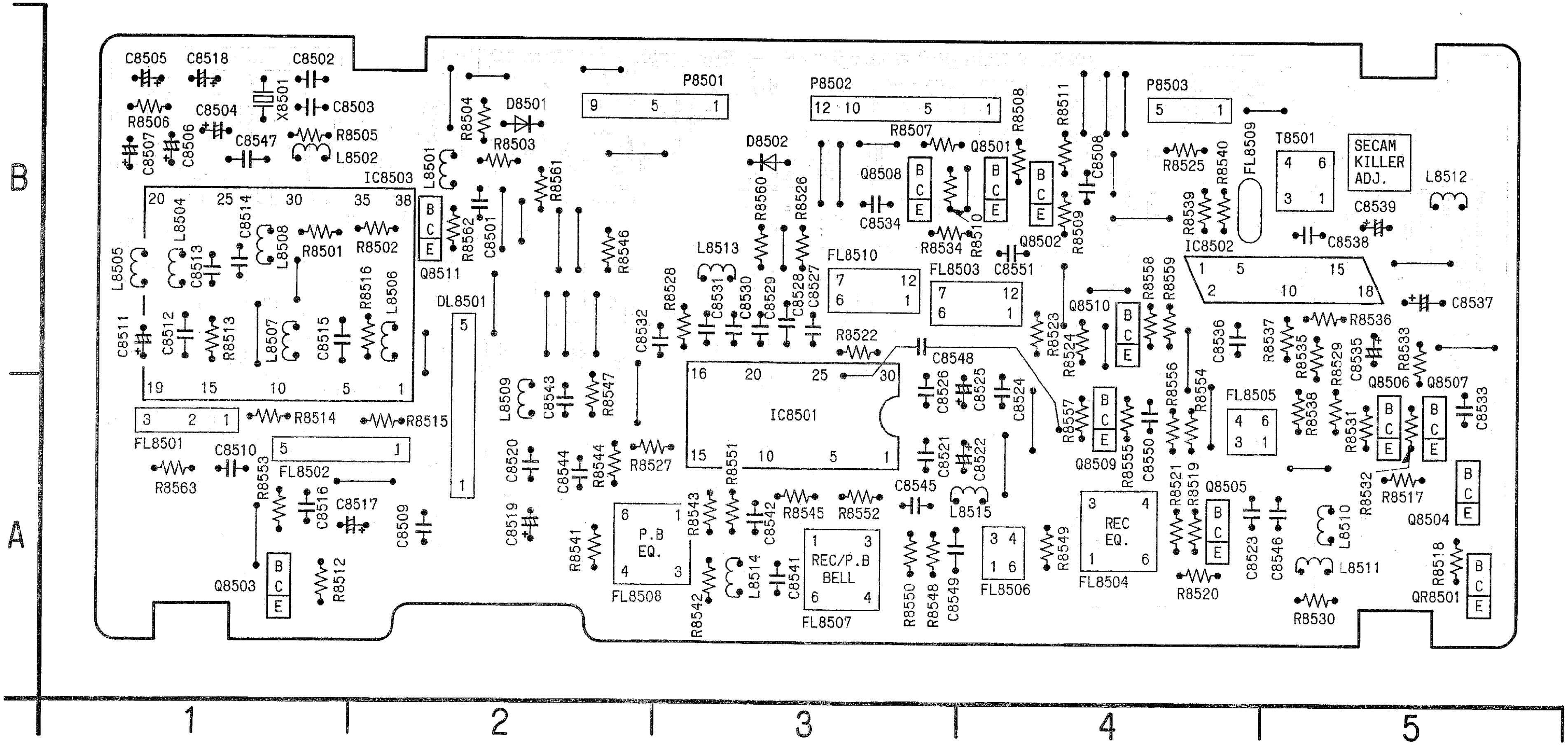
SUB CHROMINANCE TRANSISTORs DC VOLTAGE CHART (SP mode)

REF. NO.		Q8501			Q8502			Q8503			Q8504			Q8505			Q8506		
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
REC	SECAM	1.8	4.8	0.1	1.8	4.8	2.4	0.7	0	0	4.9	4.8	4.1	2.4	4.7	3.0	1.6	4.9	0
PLAY		1.8	4.8	0.1	1.8	4.8	2.4	2.9	0	2.3	4.9	0.4	4.9	0	0.4	0	1.6	4.8	0
REC	NTSC 3.58MHz	2.9	4.8	3.4	2.9	4.8	2.6	2.9	0	2.3	4.9	4.8	4.1	2.4	4.7	3.1	1.7	4.9	0
PLAY		2.8	4.8	3.4	2.8	4.8	2.6	2.9	0	2.3	4.9	0.4	4.9	0	0.4	0	1.6	4.8	0
REF. NO.		Q8507			Q8508			Q8509			Q8510			Q8511					
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
REC	SECAM	1.6	4.9	2.4	2.6	0	2.0	1.6	4.9	2.4	1.7	4.9	2.3	0.2	0	2.2			
PLAY		1.6	4.8	2.4	0.8	0	0.1	1.6	4.8	2.4	1.6	4.8	2.3	2.8	0	2.2			
REC	NTSC 3.58MHz	1.7	4.9	2.4	2.6	0	2.0	1.6	4.9	2.4	1.6	4.9	2.3	0.3	0	2.2			
PLAY		1.6	4.8	2.4	0.8	0	0.1	1.6	4.8	2.4	1.6	4.8	2.3	2.2	0	1.6			
REF. NO.		QR8501																	
MODE	PIN	E	C	B															
REC	SECAM	0	0.1	4.9															
PLAY		0	4.9	0															
REC	NTSC 3.58MHz	0	0.1	4.9															
PLAY		0	4.9	0															

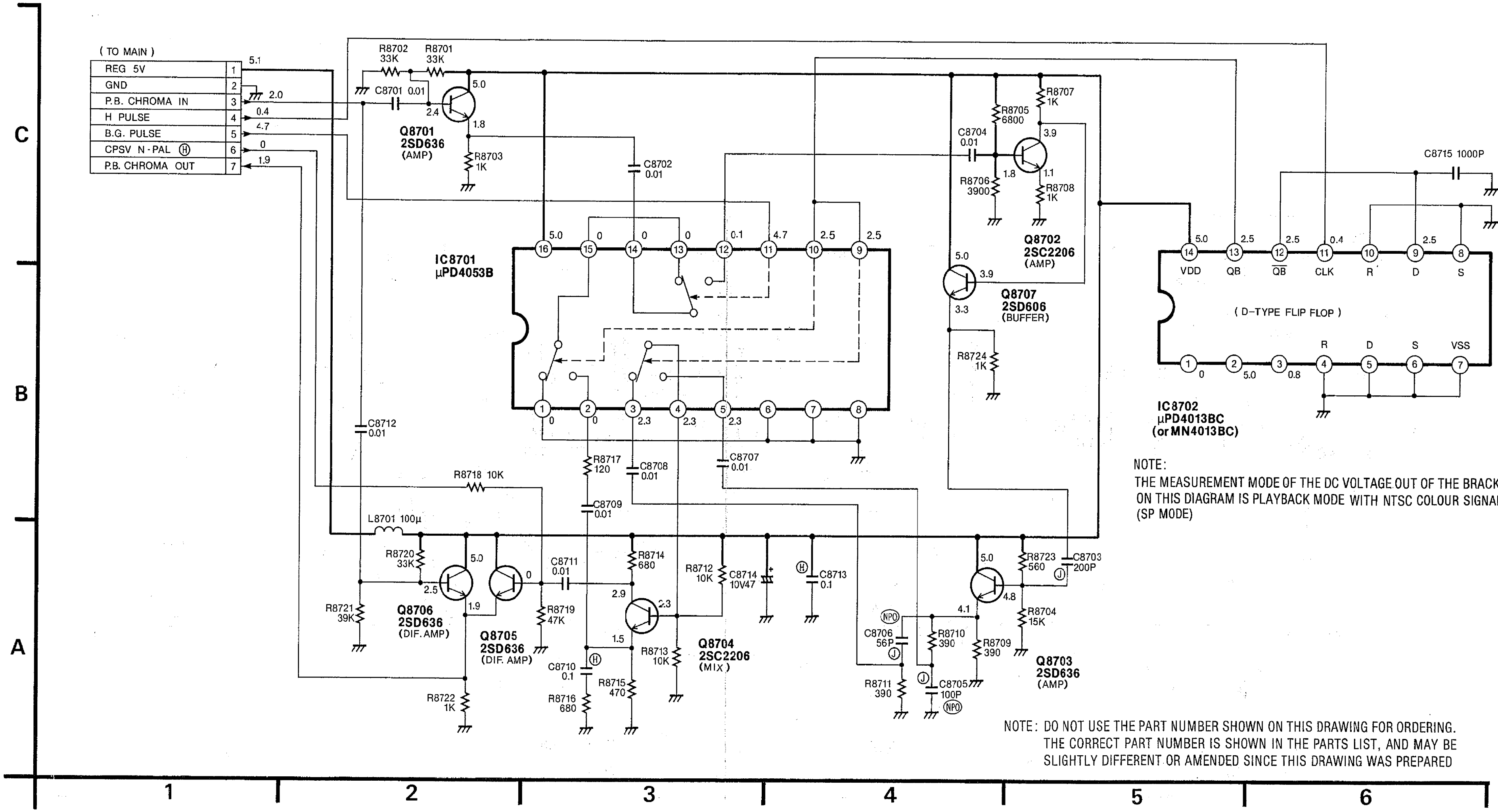
3-13 SUB CHROMINANCE C.B.A. (VEP08124A)

SUB CHROMINANCE C.B.A.			
Transistor		**Integrated Circuit**	
Q8501	B-4	IC8501	A-3
Q8502	B-4	IC8502	B-4
Q8503	A-1	IC8503	B-1
Q8504	A-5	**Adjustment**	
Q8505	A-4	T8501	B-5
Q8506	A-5	**Connector**	
Q8507	A-5	P8501	B-3
Q8508	B-3	P8502	B-3
Q8509	A-4	P8503	B-4
Q8510	B-4		
Q8511	B-2		
Transistor & Resistor			
QR8501	A-5		

ADDRESS INFORMATION


B
A
1
2
3
4
5
C8505
C8518
C8502
X8501
C8503
R8506
C8504
C8507
C8506
C8547
R8505
L8502
IC8503
L8501
R8504
D8501
R8503
R8561
P8501
9
5
1
P8502
12
10
R8507
D8502
Q8508
Q8501
R8508
R8511
C8508
P8503
R8525
R8540
FL8509
T8501
4
6
3
SECAM KILLER ADJ.
L8512
C8539
C8538
IC8502
15
18
C8537
20
25
30
35
38
L8504
C8514
L8508
R8501
R8502
L8505
C8513
R8516
L8506
Q8511
R8562
C8501
R8546
L8513
R8560
R8526
C8534
R8534
R8510
Q8502
R8509
C8551
FL8510
7
12
FL8503
R8539
R8558
R8559
Q8510
C8511
C8512
R8513
L8507
C8515
DL8501
C8532
R8528
C8531
C8530
C8529
C8528
C8527
R8522
C8548
R8523
R8524
C8536
R8537
R8536
R8535
R8529
C8535
R8533
Q8506
Q8507
19
10
FL8501
R8514
R8515
L8509
C8543
R8547
16
IC8501
C8526
C8525
C8524
R8557
R8556
R8554
FL8505
R8538
R8531
C8533
C8510
FL8502
R8563
R8553
C8516
C8517
C8509
C8520
C8544
R8544
R8527
R8551
R8543
C8521
C8522
C8545
Q8509
R8555
C8550
R8521
R8519
Q8505
R8532
R8517
Q8504
C8519
R8541
P.B EQ.
FL8508
R8542
L8514
C8542
R8545
R8552
L8515
C8541
REC/P.B BELL
FL8507
R8550
R8548
C8549
FL8506
R8549
REC EQ.
FL8504
R8520
C8523
C8546
L8510
L8511
R8530
R8518
QR8501
Q8503
R8512
B
C
E

3-14 ARTIFICIAL PAL PACK SCHEMATIC DIAGRAM


(TO MAIN)
REG 5V 1
GND 2
P.B. CHROMA IN 3
H PULSE 4
B.G. PULSE 5
CPSV N-PAL Ⓗ 6
P.B. CHROMA OUT 7
5.1
2.0
0.4
4.7
0
1.9
R8702 33K
R8701 33K
C8701 0.01
Q8701 2SD636 (AMP)
5.0
2.4
1.8
R8703 1K
C8702 0.01
IC8701 μPD4053B
5.0 0 0 0 0.1 4.7 2.5 2.5
0 0 2.3 2.3 2.3
C8712 0.01
R8717 120
C8708 0.01
C8707 0.01
C8709 0.01
R8718 10K
L8701 100μ
R8720 33K
R8721 39K
Q8706 2SD636 (DIF. AMP)
Q8705 2SD636 (DIF. AMP)
2.5
1.9
0
C8711 0.01
R8719 47K
R8722 1K
C8710 0.1
R8716 680
R8715 470
R8714 680
R8713 10K
Q8704 2SC2206 (MIX)
2.9
2.3
1.5
R8712 10K
C8714 10V47
C8713 0.1
C8704 0.01
R8705 6800
R8706 3900
R8707 1K
R8708 1K
3.9
1.8
1.1
Q8702 2SC2206 (AMP)
Q8707 2SD606 (BUFFER)
5.0
3.9
3.3
R8724 1K
C8715 1000P
IC8702 μPD4013BC (or MN4013BC)
VDD QB Q̄B CLK R D S
(D-TYPE FLIP FLOP)
R D S VSS
5.0 2.5 2.5 0.4 2.5
0 5.0 0.8
R8723 560
C8703 200P
Q8703 2SD636 (AMP)
5.0
4.8
4.1
R8704 15K
R8709 390
R8710 390
C8706 56P
C8705 100P
R8711 390
NPO
A B C
1 2 3 4 5 6

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (SP MODE)

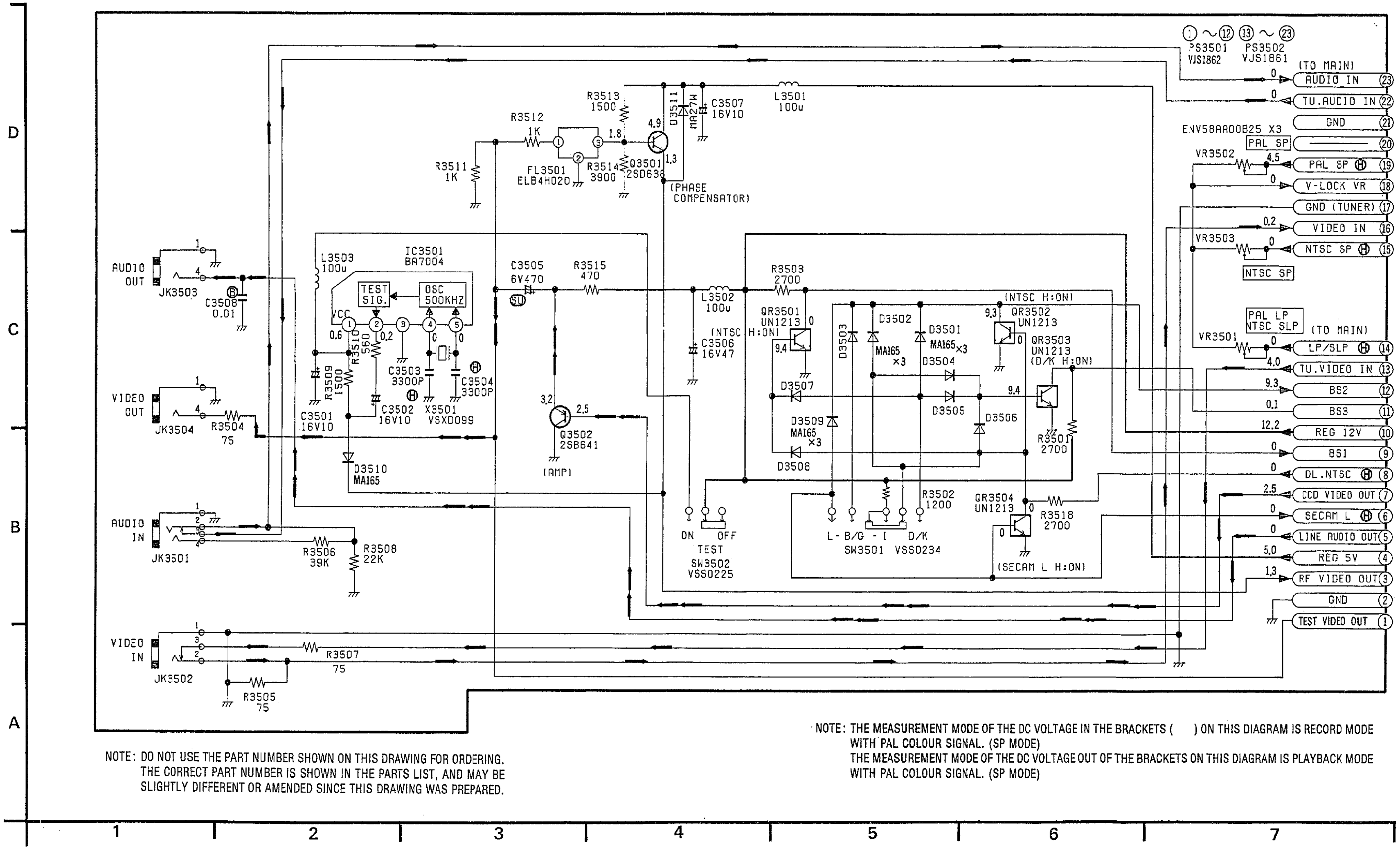
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED

Back Page:
SUB CHROMINANCE Section

3-17 INPUT/OUTPUT PACK SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

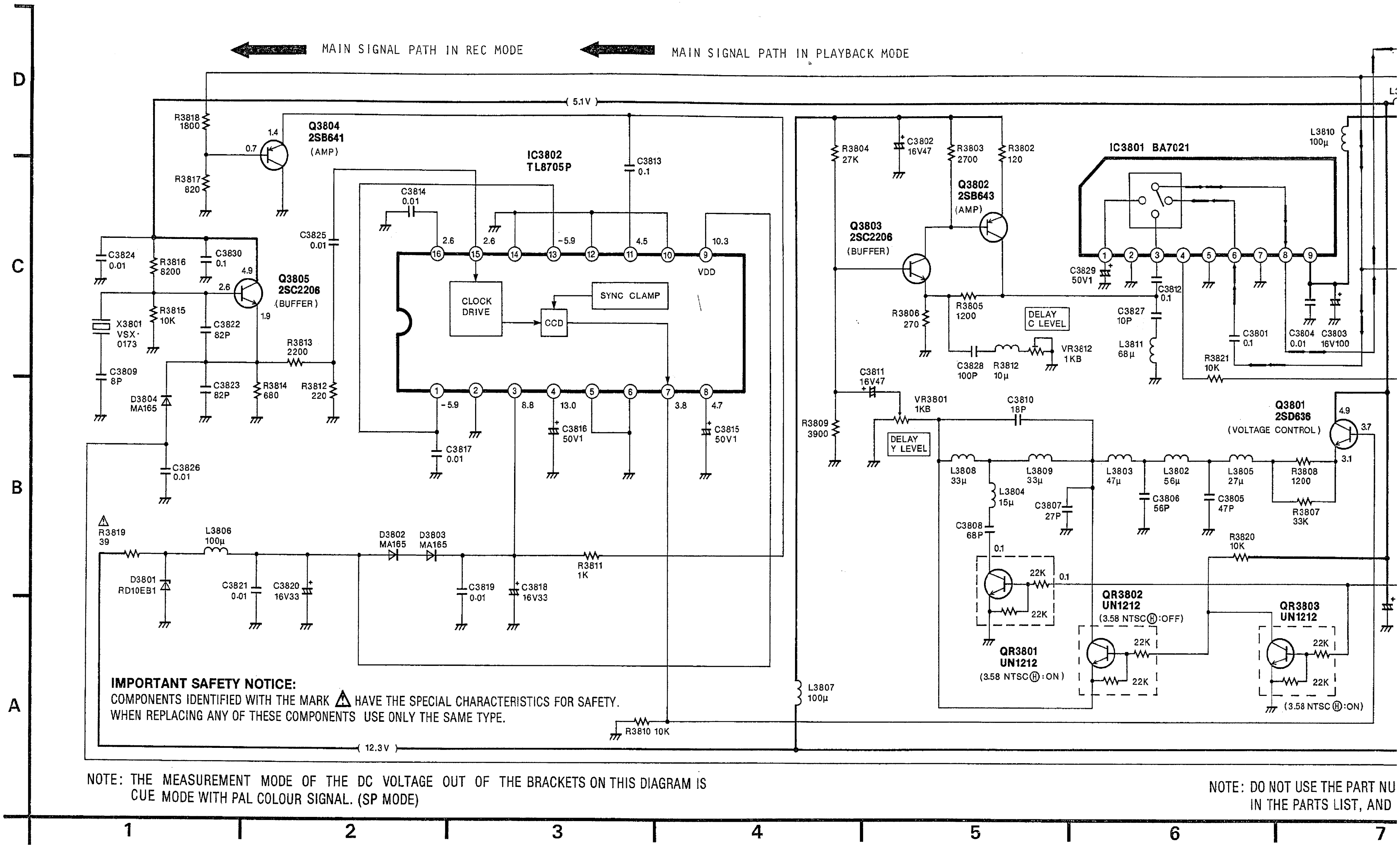

D
C
B
A
1
2
3
4
5
6
7
①～⑫ ⑬～㉓
PS3501 VJS1862
PS3502 VJS1661
(TO MAIN)
AUDIO IN ㉓
TU.AUDIO IN ㉒
GND ㉑
PAL SP ⑳
PAL SP Ⓗ ⑲
V-LOCK VR ⑱
GND (TUNER) ⑰
VIDEO IN ⑯
NTSC SP Ⓗ ⑮
NTSC SP
ENV58AA00B25 X3
VR3502
VR3503
VR3501
PAL LP
NTSC SLP
(TO MAIN)
LP/SLP Ⓗ ⑭
TU.VIDEO IN ⑬
BS2 ⑫
BS3 ⑪
REG 12V ⑩
BS1 ⑨
DL.NTSC Ⓗ ⑧
CCD VIDEO OUT ⑦
SECAM L Ⓗ ⑥
LINE AUDIO OUT ⑤
REG 5V ④
RF VIDEO OUT ③
GND ②
TEST VIDEO OUT ①
R3513 1500
R3512 1K
R3511 1K
FL3501 ELB4H020
R3514 3900
Q3501 2SD638
D3511 MA27W
C3507 16V10
L3501 100u
(PHASE COMPENSATOR)
L3503 100u
IC3501 BA7004
TEST SIG.
OSC 500KHZ
VCC
R3510 560
R3509 1500
C3501 16V10
C3503 3300P
C3502 16V10
X3501 VSX0099
C3504 3300P
D3510 MA165
C3505 6V470
R3515 470
Q3502 2SB641
(AMP)
L3502 100u
C3506 16V47
(NTSC H:ON)
R3503 2700
QR3501 UN1213
D3503
D3502
MA165 ×3
D3501 MA165×3
D3504
(NTSC H:ON)
QR3502 UN1213
QR3503 UN1213
(D/K H:ON)
D3507
D3509 MA165 ×3
D3508
D3505
D3506
R3501 2700
R3502 1200
QR3504 UN1213
R3518 2700
(SECAM L H:ON)
L - B/G - I D/K
SW3501 VSS0234
ON OFF
TEST
SW3502 VSS0225
AUDIO OUT
JK3503
C3508 0.01
VIDEO OUT
JK3504
R3504 75
AUDIO IN
JK3501
R3506 39K
R3508 22K
VIDEO IN
JK3502
R3507 75
R3505 75

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

Next Page:
0.32H SKEW Section

3-18 0 32H SKEW SCHEMATIC DIAGRAM

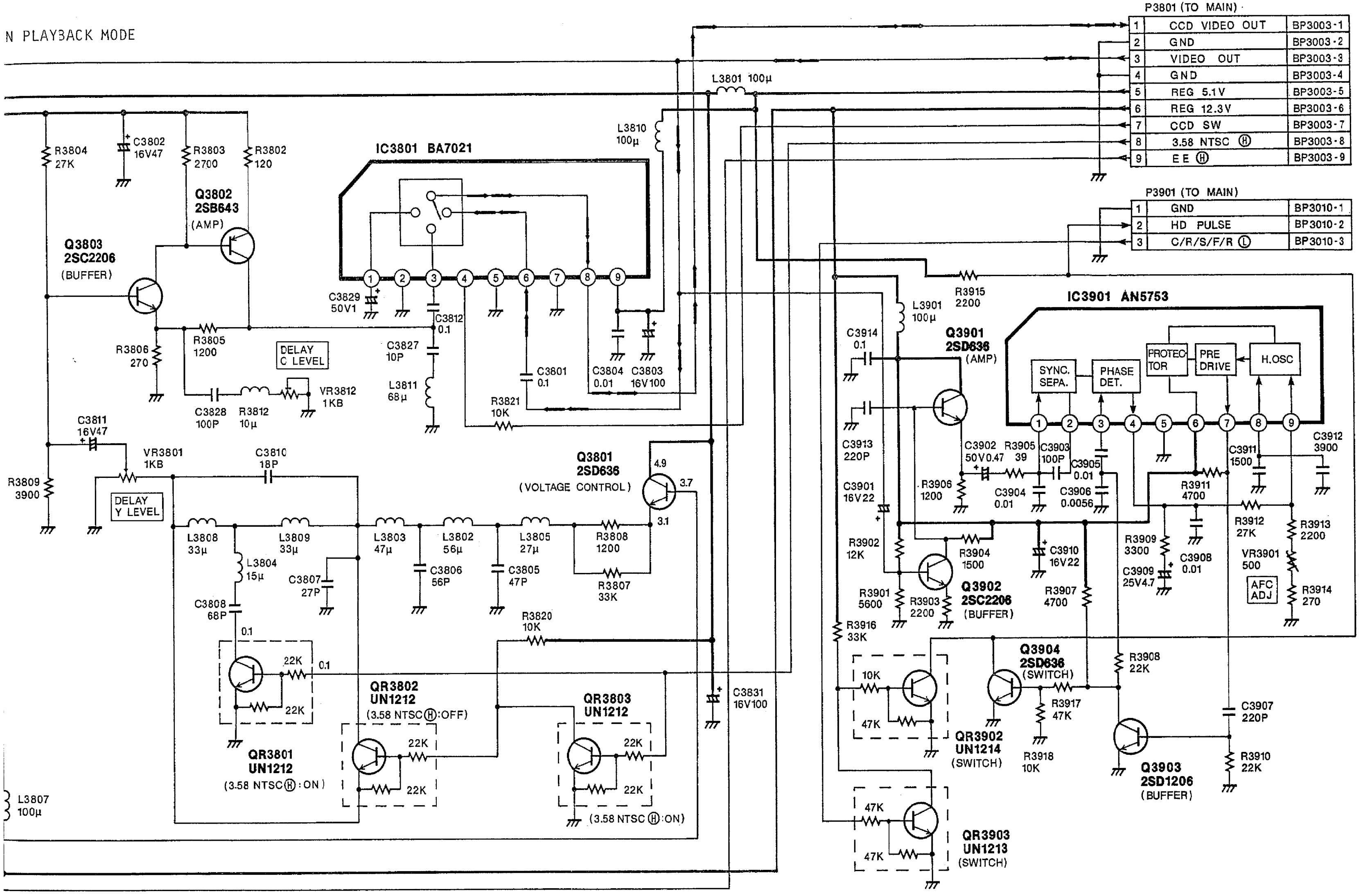

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
D
C
B
A
1
2
3
4
5
6
7
5.1V
12.3V
R3818 1800
R3817 820
Q3804 2SB641 (AMP)
1.4
0.7
IC3802 TL8705P
C3813 0.1
C3814 0.01
C3825 0.01
C3824 0.01
R3816 8200
C3830 0.1
4.9
2.6
1.9
Q3805 2SC2206 (BUFFER)
X3801 VSX-0173
R3815 10K
C3822 82P
R3813 2200
C3809 8P
C3823 82P
R3814 680
R3812 220
D3804 MA165
C3826 0.01
CLOCK DRIVE
SYNC CLAMP
CCD
VDD
2.6
2.6
-5.9
4.5
10.3
-5.9
8.8
13.0
3.8
4.7
C3816 50V1
C3815 50V1
C3817 0.01
R3819 39
L3806 100µ
D3801 RD10EB1
C3821 0.01
C3820 16V33
D3802 MA165
D3803 MA165
C3819 0.01
C3818 16V33
R3811 1K
R3810 10K
R3804 27K
C3802 16V47
R3803 2700
R3802 120
Q3802 2SB643 (AMP)
Q3803 2SC2206 (BUFFER)
R3806 270
R3805 1200
DELAY C LEVEL
VR3812 1KB
C3828 100P
R3812 10µ
IC3801 BA7021
L3810 100µ
C3829 50V1
C3812 0.1
C3827 10P
L3811 68µ
C3801 0.1
C3804 0.01
C3803 16V100
R3821 10K
C3811 16V47
VR3801 1KB
DELAY Y LEVEL
C3810 18P
R3809 3900
Q3801 2SD636 (VOLTAGE CONTROL)
4.9
3.7
3.1
L3808 33µ
L3809 33µ
L3804 15µ
C3807 27P
C3808 68P
L3803 47µ
L3802 56µ
C3806 56P
L3805 27µ
C3805 47P
R3808 1200
R3807 33K
R3820 10K
0.1
22K
0.1
22K
QR3801 UN1212 (3.58 NTSCⒽ:ON)
QR3802 UN1212 (3.58 NTSCⒽ:OFF)
22K
22K
QR3803 UN1212
22K
22K
(3.58 NTSCⒽ:ON)
L3807 100µ

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS CUE MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE THE PART NU
IN THE PARTS LIST, AND

N PLAYBACK MODE


P3801 (TO MAIN)
1 CCD VIDEO OUT BP3003-1
2 GND BP3003-2
3 VIDEO OUT BP3003-3
4 GND BP3003-4
5 REG 5.1V BP3003-5
6 REG 12.3V BP3003-6
7 CCD SW BP3003-7
8 3.58 NTSC Ⓗ BP3003-8
9 E E Ⓗ BP3003-9
P3901 (TO MAIN)
1 GND BP3010-1
2 HD PULSE BP3010-2
3 C/R/S/F/R Ⓛ BP3010-3
L3801 100µ
L3810 100µ
IC3801 BA7021
R3804 27K
C3802 16V47
R3803 2700
R3802 120
Q3802 2SB643 (AMP)
Q3803 2SC2206 (BUFFER)
R3806 270
R3805 1200
DELAY C LEVEL
C3828 100P
R3812 10µ
VR3812 1KB
C3829 50V1
C3812 0.1
C3827 10P
L3811 68µ
R3821 10K
C3801 0.1
C3804 0.01
C3803 16V100
C3811 16V47
VR3801 1KB
DELAY Y LEVEL
R3809 3900
C3810 18P
Q3801 2SD636 (VOLTAGE CONTROL)
4.9
3.7
3.1
L3808 33µ
L3809 33µ
L3804 15µ
C3807 27P
C3808 68P
L3803 47µ
L3802 56µ
C3806 56P
L3805 27µ
C3805 47P
R3808 1200
R3807 33K
R3820 10K
0.1
22K
QR3801 UN1212 (3.58 NTSCⒽ:ON)
QR3802 UN1212 (3.58 NTSCⒽ:OFF)
QR3803 UN1212 (3.58 NTSCⒽ:ON)
C3831 16V100
L3807 100µ
R3915 2200
L3901 100µ
IC3901 AN5753
Q3901 2SD636 (AMP)
C3914 0.1
C3913 220P
C3901 16V22
SYNC. SEPA.
PHASE DET.
PROTEC TOR
PRE DRIVE
H.OSC
C3902 50V0.47
R3905 39
C3903 100P
C3905 0.01
R3906 1200
C3904 0.01
C3906 0.0056
C3911 1500
C3912 3900
R3911 4700
R3912 27K
R3913 2200
VR3901 500
AFC ADJ
R3914 270
R3909 3300
C3908 0.01
C3909 25V4.7
R3902 12K
R3904 1500
C3910 16V22
Q3902 2SC2206 (BUFFER)
R3901 5600
R3903 2200
R3907 4700
R3916 33K
Q3904 2SD636 (SWITCH)
R3908 22K
10K
47K
R3917 47K
QR3902 UN1214 (SWITCH)
R3918 10K
C3907 220P
Q3903 2SD1206 (BUFFER)
R3910 22K
QR3903 UN1213 (SWITCH)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

5 6 7 8 9

3-19 0 32H SKEW C B A (VEP03490A)

0.32H SKEW C.B.A.

Transistor	
Q3801	A-3
Q3802	B-2
Q3803	B-3
Q3805	A-4
Q3901	B-2
Q3902	B-2

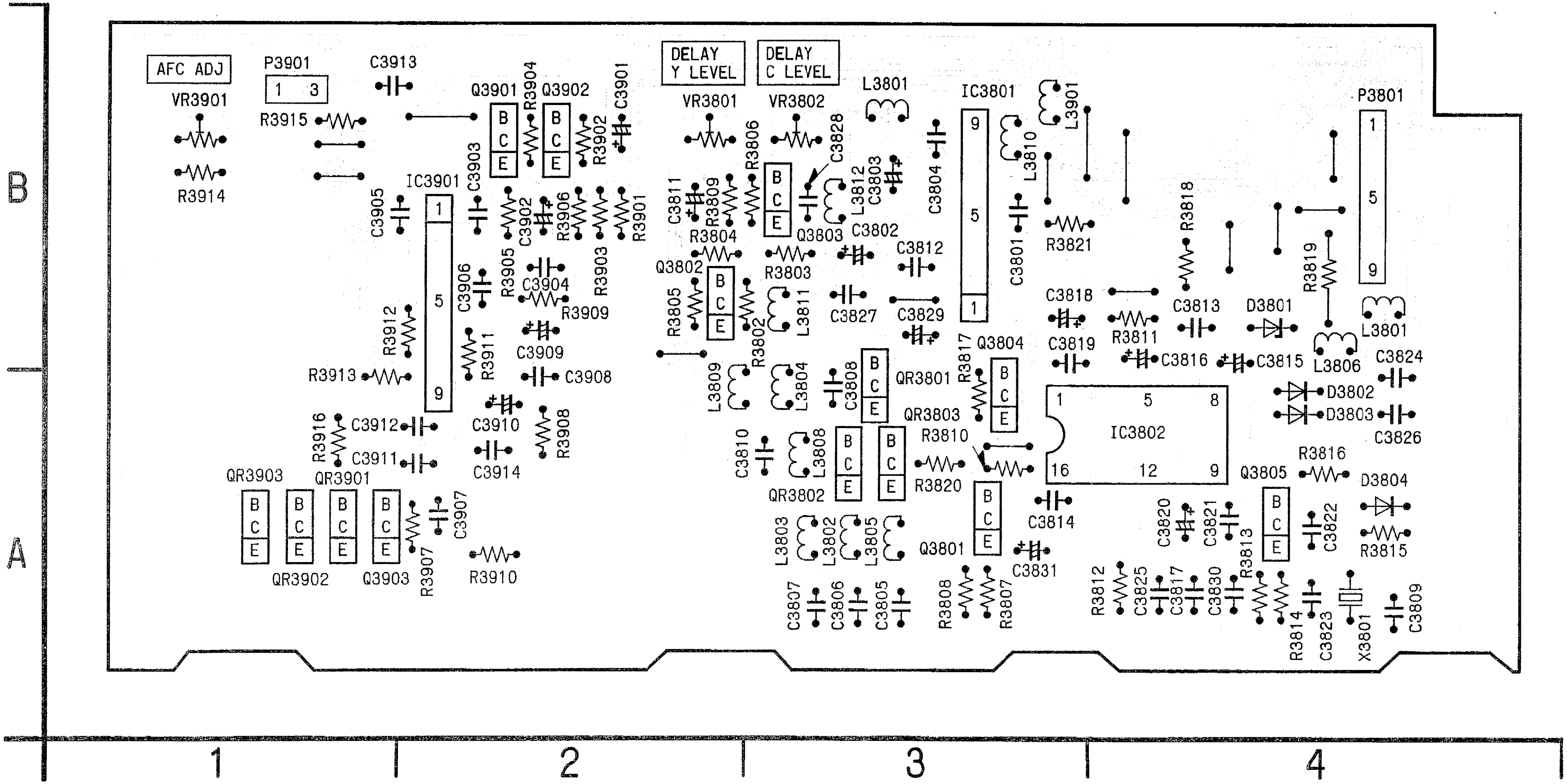
Transistor & Resistor	
QR3801	A-3
QR3802	A-3
QR3803	A-3
QR3804	B-3
QR3901	A-1
QR3902	A-1
QR3903	A-1

Integrated Circuit	
IC3801	B-3
IC3802	A-4
IC3901	B-2

Adjustment	
VR3801	B-2
VR3802	B-3
VR3901	B-1

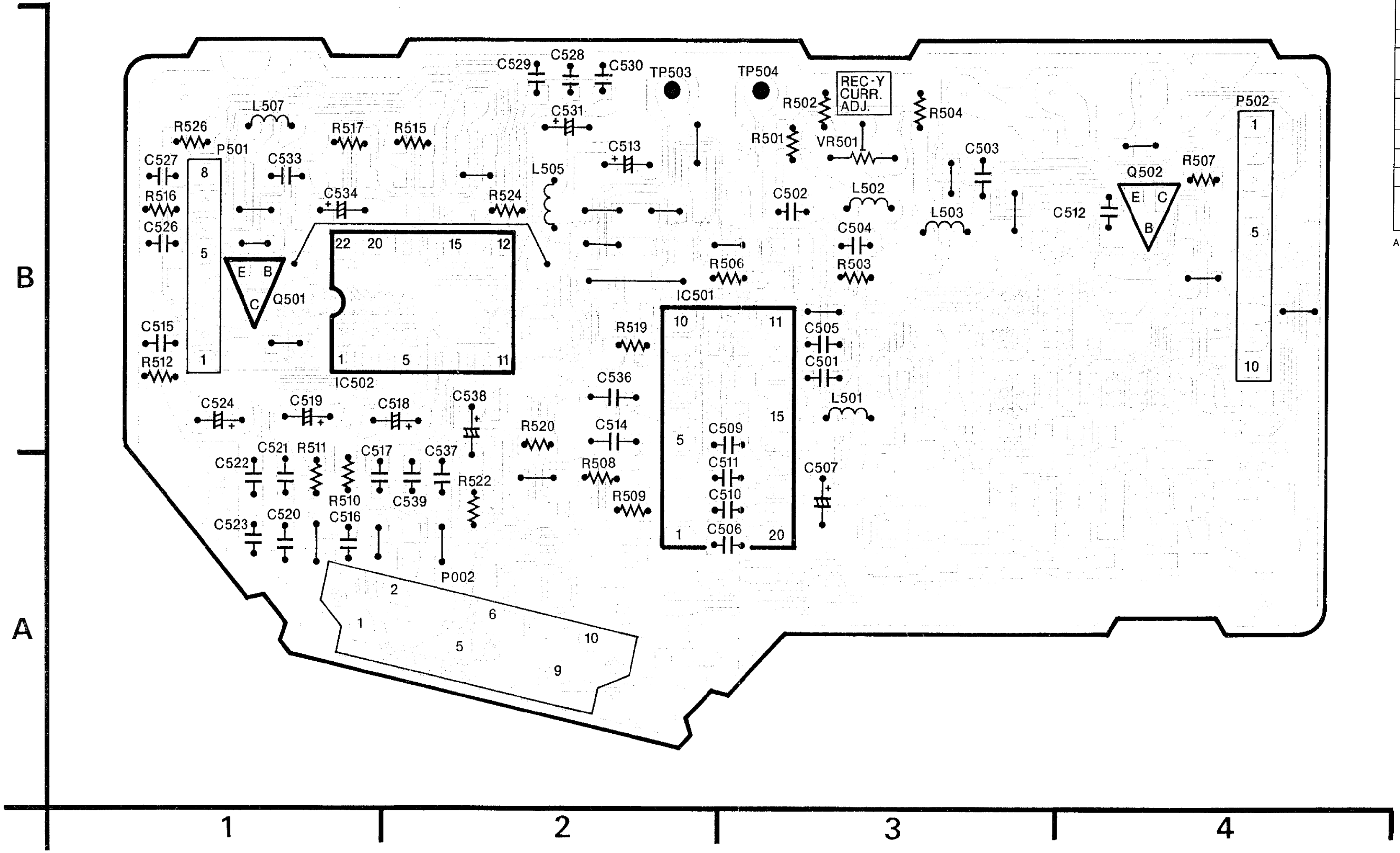
Connector	
P3801	B-4
P3901	B-1

ADDRESS INFORMATION



B
A
1
2
3
4
AFC ADJ
VR3901
R3914
P3901
1 3
R3915
C3913
Q3901
Q3902
R3904
R3902
C3901
IC3901
C3903
C3905
C3902
R3906
R3905
R3903
R3901
C3906
C3904
R3909
C3909
C3908
R3912
R3913
R3911
C3910
R3908
R3916
C3912
C3911
C3914
QR3903
QR3901
QR3902
Q3903
R3907
C3907
R3910
DELAY Y LEVEL
VR3801
DELAY C LEVEL
VR3802
R3806
C3828
C3811
R3809
R3804
Q3803
C3802
L3812
C3803
Q3802
R3803
R3805
R3802
L3811
C3827
L3809
L3804
C3808
QR3801
L3801
C3804
C3812
C3829
IC3801
L3901
L3810
C3801
R3821
R3817
Q3804
QR3803
R3810
R3820
C3810
L3808
QR3802
L3803
L3802
L3805
Q3801
C3807
C3806
C3805
R3808
R3807
C3831
C3814
R3818
C3818
R3811
C3813
D3801
C3819
C3816
C3815
L3806
R3819
P3801
L3801
C3824
D3802
D3803
C3826
IC3802
1 5 8
16 12 9
R3816
Q3805
D3804
R3815
C3820
C3821
R3813
C3822
R3812
C3825
C3817
C3830
R3814
C3823
X3801
C3809
B C E

3-20. HEAD AMP C.B.A. (VEP05113E)

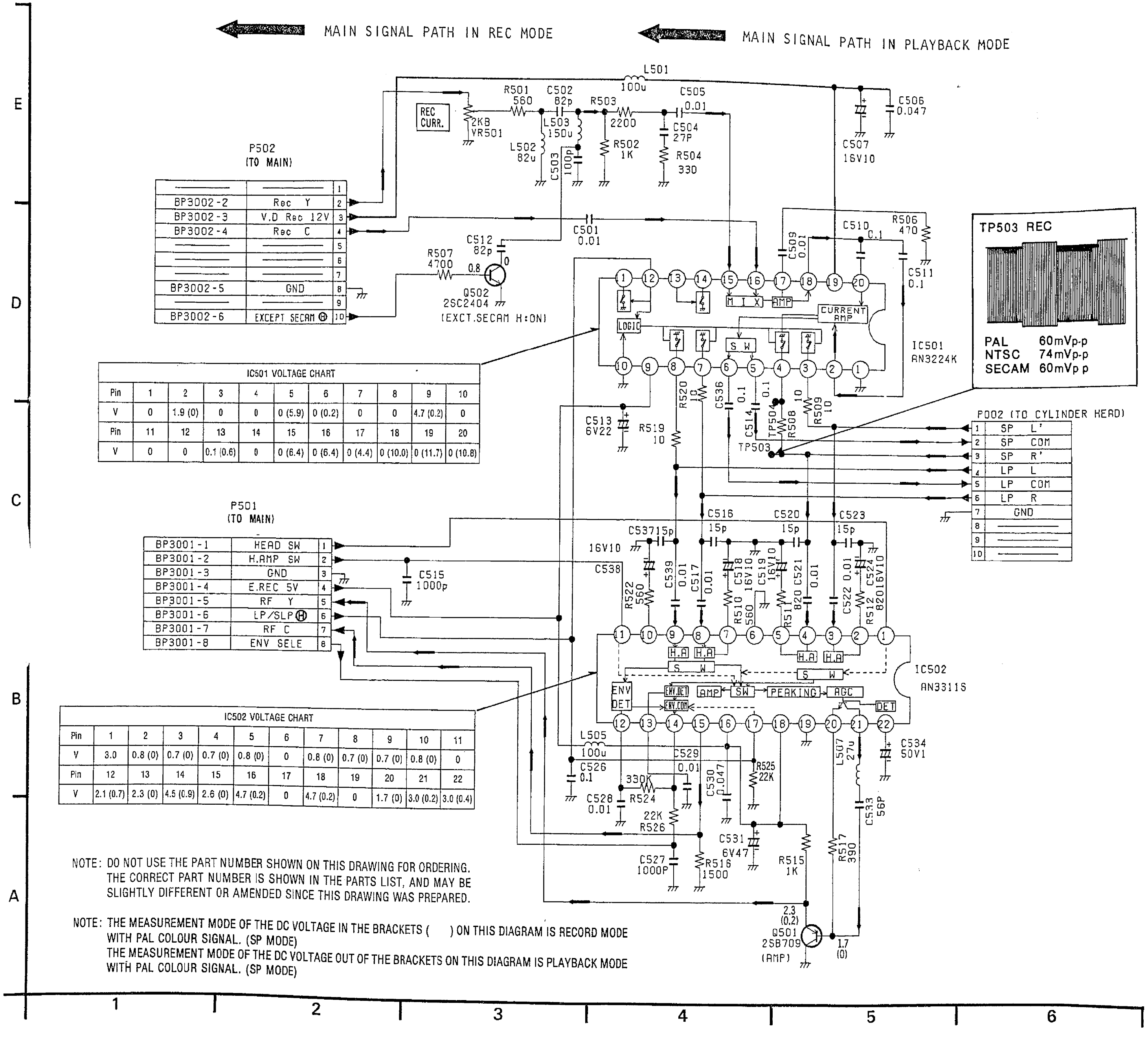

B
A
1
2
3
4
C529
C528
C530
TP503
TP504
REC-Y CURR. ADJ.
R502
R504
R501
VR501
L507
R526
R517
R515
P501
C527
C533
C531
C513
L505
R524
C534
R516
C526
Q501
E
B
C
IC502
22
20
15
12
1
5
11
8
C515
R512
C524
C519
C518
C538
C521
R511
C517
C537
C522
R510
C539
R522
C523
C520
C516
P002
2
6
1
5
10
9
R520
C536
C514
R508
R509
R519
R506
IC501
11
15
20
C509
C511
C510
C506
C502
L502
C504
R503
C505
C501
L501
C507
C503
L503
C512
Q502
R507
P502

HEAD AMP C.B.A.	
Transistor	
Q501 Q502	B-1 B-4
Integrated Circuit	
IC501 IC502	B-1 B-2
Test Point	
TP503 TP504	B-2 B-3
Adjustment	
VR501	B-3
Connector	
P002 P501 P502	A-2 B-1 B-4

ADDRESS INFORMATION

Back Page:
0.32 H SKEW Section

3-21. HEAD AMP SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
P502
(TO MAIN)
BP3002-2 Rec Y
BP3002-3 V.D Rec 12V
BP3002-4 Rec C
BP3002-5 GND
BP3002-6 EXCEPT SECAM Ⓗ
REC CURR.
2KB VR501
R501 560
C502 82p
R503 2200
L501 100u
C505 0.01
C504 27P
C506 0.047
L503 150u
L502 82u
C503 100p
R502 1K
R504 330
C507 16V10
C501 0.01
C509 0.01
C510 0.1
R506 470
C511 0.1
C512 82p
R507 4700
Q502 2SC2404
(EXCT.SECAM H:ON)
LOGIC
M I X
AMP
CURRENT AMP
S W
IC501 AN3224K
TP503 REC
PAL 60mVp-p
NTSC 74mVp-p
SECAM 60mVp p
C513 6V22
R519 10
R520 10
C536
C514 0.1
TP504
R508 10
R509 10
TP503
P002 (TO CYLINDER HEAD)
SP L'
SP COM
SP R'
LP L
LP COM
LP R
GND
P501
(TO MAIN)
BP3001-1 HEAD SW
BP3001-2 H.AMP SW
BP3001-3 GND
BP3001-4 E.REC 5V
BP3001-5 RF Y
BP3001-6 LP/SLP Ⓗ
BP3001-7 RF C
BP3001-8 ENV SELE
C515 1000p
C537 15p
16V10
C538
C516 15p
C520 15p
C523 15p
C539 0.01
C517 0.01
C518 16V10
C519 16V10
C521 0.01
C522 0.01
C524 16V10
R522 560
R510 560
R511 820
R512 820
H.A
S W
ENV DET
ENV.DET
ENV.COM
AMP
SW
PEAKING
AGC
DET
IC502 AN3311S
L505 100u
C526 0.1
C528 0.01
R524 330
C529 0.01
C530 0.047
R525 22K
L507 27u
C533 56P
C534 50V1
R526 22K
C531 6V47
C527 1000P
R516 1500
R515 1K
R517 390
2.3 (0.2)
Q501 2SB709 (AMP)
1.7 (0)
E
D
C
B
A
1
2
3
4
5
6

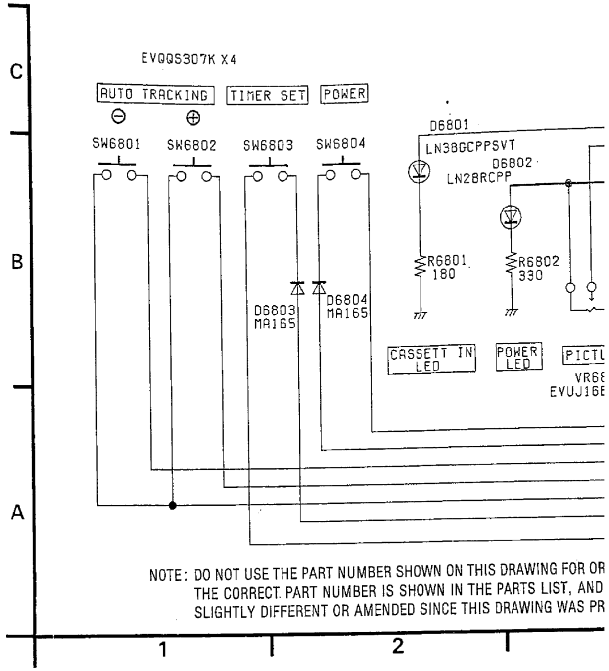
IC501 VOLTAGE CHART										
Pin	1	2	3	4	5	6	7	8	9	10
V	0	1.9 (0)	0	0	0 (5.9)	0 (0.2)	0	0	4.7 (0.2)	0
Pin	11	12	13	14	15	16	17	18	19	20
V	0	0	0.1 (0.6)	0	0 (6.4)	0 (6.4)	0 (4.4)	0 (10.0)	0 (11.7)	0 (10.8)

IC502 VOLTAGE CHART											
Pin	1	2	3	4	5	6	7	8	9	10	11
V	3.0	0.8 (0)	0.7 (0)	0.7 (0)	0.8 (0)	0	0.8 (0)	0.7 (0)	0.7 (0)	0.8 (0)	0
Pin	12	13	14	15	16	17	18	19	20	21	22
V	2.1 (0.7)	2.3 (0)	4.5 (0.9)	2.6 (0)	4.7 (0.2)	0	4.7 (0.2)	0	1.7 (0)	3.0 (0.2)	3.0 (0.4)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

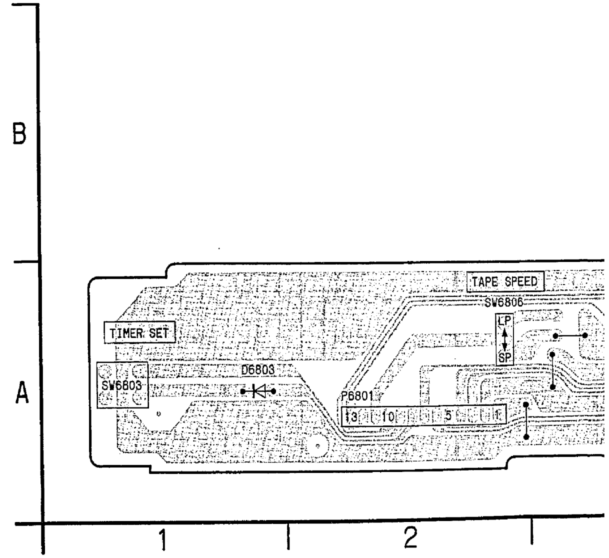
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

3-22 OPERATION SCHEMATIC DIAGRAM


EVQQS307K X4
AUTO TRACKING
⊖
⊕
TIMER SET
POWER
SW6801
SW6802
SW6803
SW6804
D6801
LN38GCPPSVT
D6802
LN28RCPP
R6801 180
R6802 330
D6803 MA165
D6804 MA165
CASSETT IN LED
POWER LED
PICTU
VR68
EVUJ16E
C
B
A
1
2

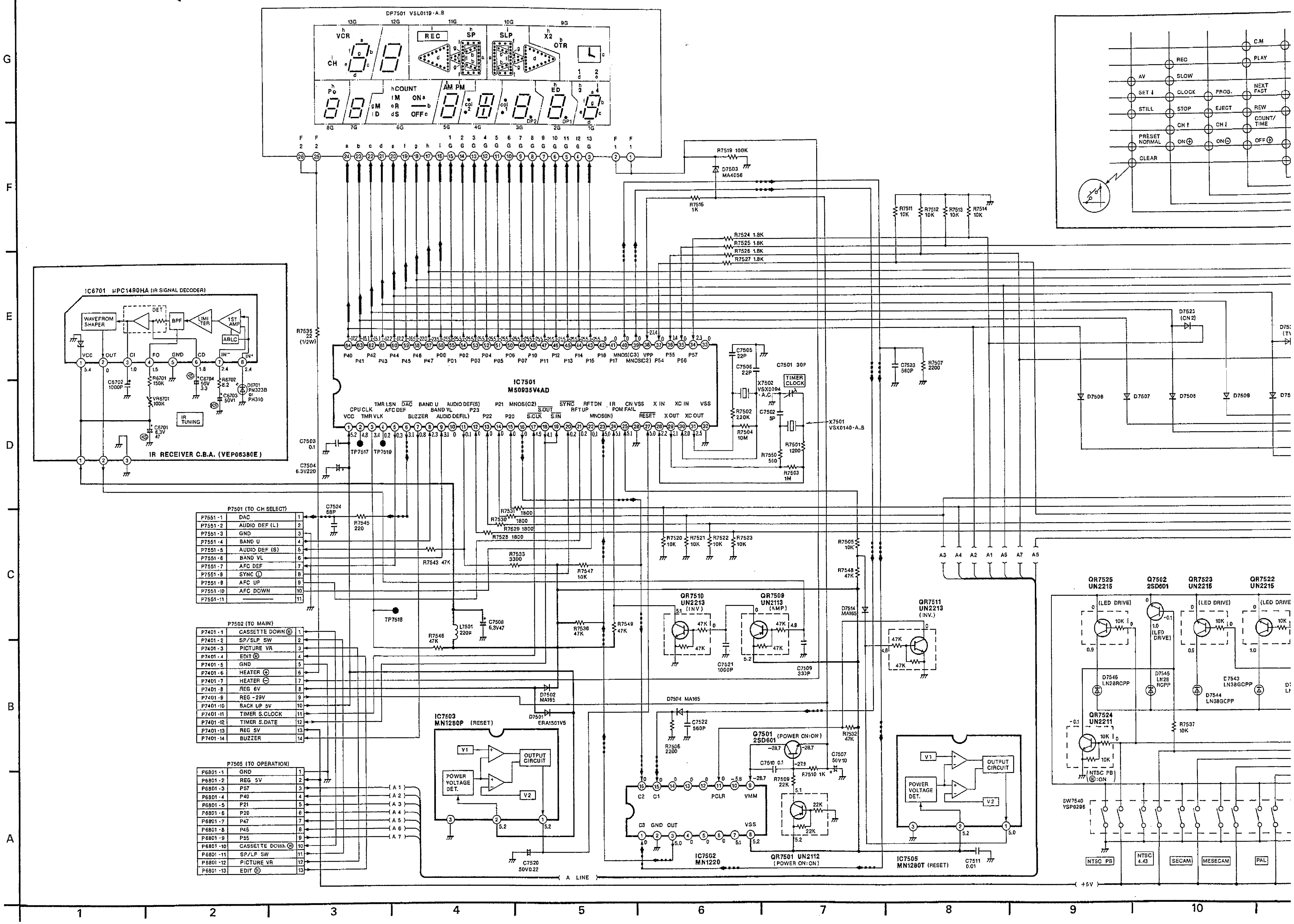
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR OR
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PR

3-23 OPERATION C B A (VEP06462A)


TAPE SPEED
SW6806
LP
SP
TIMER SET
SW6803
D6803
P6801
13
10
5
B
A
1
2

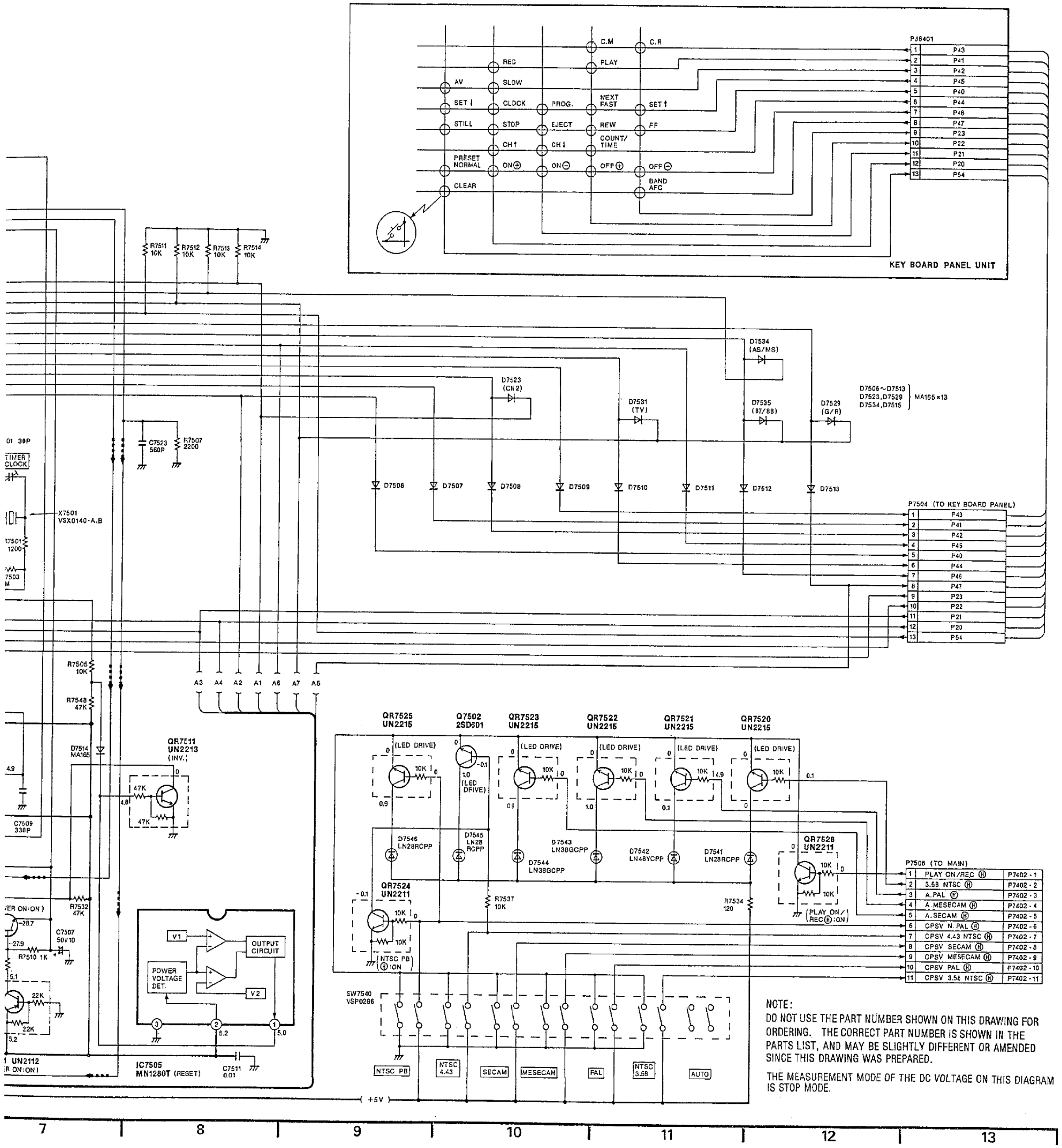
3-24. TIMER SCHEMATIC DIAGRAM

SEGMENT CONTROL SIGNAL   GRID CONTROL SIGNAL   TUNE CONTROL SIGNAL



DP7501 VSL0119-A.B
VCR
CH
REC
SP
SLP
X2
OTR
COUNT
AM PM
ED
ON
OFF
IC6701 μPC1490HA (IR SIGNAL DECODER)
WAVEFROM SHAPER
DET
BPF
LIMI TER
1ST AMP
ABLC
VCC
OUT
CI
FO
GND
CD
IN⁻
IN⁺
C6702 1000P
R6701 150K
VR6701 100K
C6701 6.3V 47
C6704 50V 3.3
R6702 8.2
C6703 50V1
D6701 PH323B or PH310
IR TUNING
IR RECEIVER C.B.A. (VEP05380E)
IC7501 M50935V4AD
R7535 22 (1/2W)
C7503 0.1
C7504 6.3V220
TP7517
TP7519
TP7518
R7519 100K
D7503 MA4056
R7516 1K
R7511 10K
R7512 10K
R7513 10K
R7514 10K
R7524 1.8K
R7525 1.8K
R7526 1.8K
R7527 1.8K
C7505 22P
C7506 22P
C7501 30P
X7502 VSX0094 A.C
TIMER CLOCK
C7502 5P
R7502 220K
R7504 10M
X7501 VSX0140-A.B
R7501 1200
R7550 560
R7503 1M
C7523 560P
R7507 2200
D7523 (CN2)
D7506
D7507
D7508
D7509
P7501 (TO CH SELECT)
P7551-1 DAC
P7551-2 AUDIO DEF (L)
P7551-3 GND
P7551-4 BAND U
P7551-5 AUDIO DEF (S)
P7551-6 BAND VL
P7551-7 AFC DEF
P7551-8 SYNC Ⓛ
P7551-9 AFC UP
P7551-10 AFC DOWN
P7551-11
C7524 68P
R7545 220
R7543 47K
R7531 1800
R7530 1800
R7529 1800
R7528 1800
R7533 3300
R7547 10K
R7520 10K
R7521 10K
R7522 10K
R7523 10K
R7505 10K
R7548 47K
A3 A4 A2 A1 A6 A7 A5
P7502 (TO MAIN)
P7401-1 CASSETTE DOWN Ⓗ
P7401-2 SP/SLP SW
P7401-3 PICTURE VR
P7401-4 EDIT Ⓗ
P7401-5 GND
P7401-6 HEATER ⊕
P7401-7 HEATER ⊖
P7401-8 REG 6V
P7401-9 REG -29V
P7401-10 BACK UP 5V
P7401-11 TIMER S.CLOCK
P7401-12 TIMER S.DATE
P7401-13 REG 5V
P7401-14 BUZZER
L7501 220H
C7508 6.3V47
R7546 47K
R7536 47K
R7549 47K
QR7510 UN2213 (INV)
QR7509 UN2113 (AMP)
C7521 1000P
C7509 330P
D7514 MA165
QR7511 UN2213 (INV.)
QR7525 UN2215
Q7502 2SD601
QR7523 UN2215
QR7522 UN2215
(LED DRIVE)
D7546 LN28RCPP
D7545 LN28RCPP
D7543 LN38GCPP
D7544 LN38GCPP
QR7524 UN2211
R7537 10K
(NTSC PB) Ⓗ:ON
SW7540 VSP0295
NTSC PB
NTSC 4.43
SECAM
MESECAM
PAL
D7502 MA165
D7501 ERA15-01V5
IC7503 MN1280P (RESET)
V1
V2
OUTPUT CIRCUIT
POWER VOLTAGE DET.
C7520 50V0.22
A LINE
D7504 MA165
C7522 560P
R7506 2200
Q7501 2SD601 (POWER ON:ON)
C7510 0.1
R7509 22K
F7510 1K
C7507 50V10
R7532 47K
IC7502 MN1220
QR7501 UN2112 (POWER ON:ON)
IC7505 MN1280T (RESET)
C7511 0.01
+5V
P7505 (TO OPERATION)
P6801-1 GND
P6801-2 REG 5V
P6801-3 P57
P6801-4 P40
P6801-5 P21
P6801-6 P20
P6801-7 P47
P6801-8 P45
P6801-9 P55
P6801-10 CASSETTE DOWN Ⓗ
P6801-11 SP/LP SW
P6801-12 PICTURE VR
P6801-13 EDIT Ⓗ
C.M
REC
PLAY
AV
SLOW
SET ↓
CLOCK
PROG.
NEXT FAST
STILL
STOP
EJECT
REW
CH ↑
CH ↓
COUNT/ TIME
PRESET NORMAL
ON⊕
ON⊖
OFF⊕
CLEAR
G
F
E
D
C
B
A
1 2 3 4 5 6 7 8 9 10

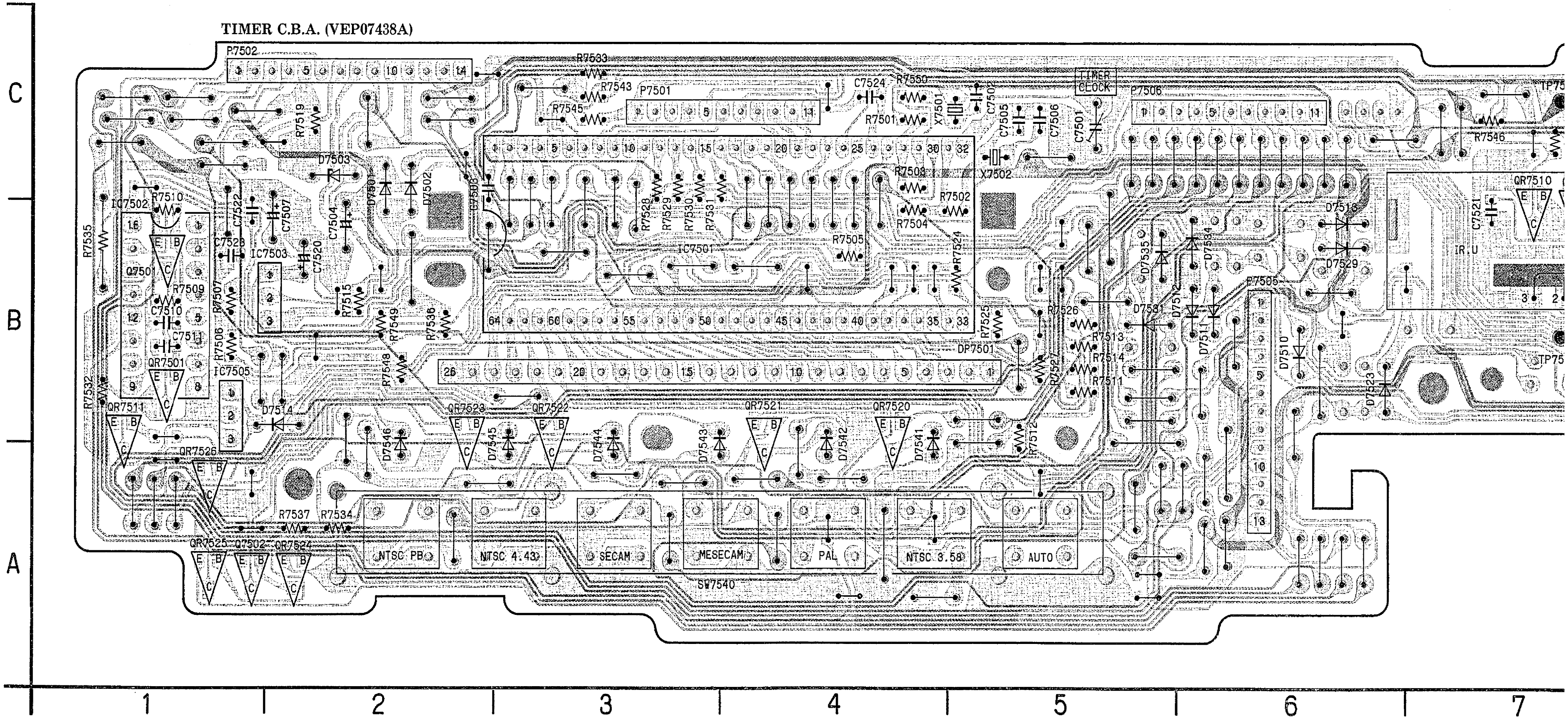
TUNE CONTROL SIGNAL


C.M
C.R
REC
PLAY
AV
SLOW
SET ↓
CLOCK
PROG.
NEXT FAST
SET ↑
STILL
STOP
EJECT
REW
FF
CH ↑
CH ↓
COUNT/ TIME
PRESET NORMAL
ON⊕
ON⊖
OFF⊕
OFF⊖
CLEAR
BAND AFC
PJ6401
1 P43
2 P41
3 P42
4 P45
5 P40
6 P44
7 P46
8 P47
9 P23
10 P22
11 P21
12 P20
13 P54
KEY BOARD PANEL UNIT
R7511 10K
R7512 10K
R7513 10K
R7514 10K
D7534 (AS/MS)
D7523 (CN2)
D7531 (TV)
D7535 (87/88)
D7529 (G/R)
D7506~D7513, D7523,D7529, D7534,D7515 MA165×13
C7523 560P
R7507 2200
01 38P
TIMER CLOCK
X7501 VSX0140-A,B
R7501 1200
7503
D7506
D7507
D7508
D7509
D7510
D7511
D7512
D7513
P7504 (TO KEY BOARD PANEL)
1 P43
2 P41
3 P42
4 P45
5 P40
6 P44
7 P46
8 P47
9 P23
10 P22
11 P21
12 P20
13 P54
R7505 10K
R7548 47K
A3 A4 A2 A1 A6 A7 A5
D7514 MA165
QR7511 UN2213 (INV.)
47K
47K
4.8
4.9
C7509 330P
QR7525 UN2215
Q7502 2SD601
QR7523 UN2215
QR7522 UN2215
QR7521 UN2215
QR7520 UN2215
(LED DRIVE)
10K
0.9
1.0
-0.1
1.0 (LED DRIVE)
0.1
4.9
D7546 LN28RCPP
D7545 LN28 RCPP
D7543 LN38GCPP
D7544 LN38GCPP
D7542 LN48YCPP
D7541 LN28RCPP
QR7526 UN2211
10K
(PLAY ON/ REC Ⓗ:ON)
QR7524 UN2211
(NTSC PB Ⓗ:ON)
R7537 10K
R7534 120
P7506 (TO MAIN)
1 PLAY ON/REC Ⓗ P7402-1
2 3.58 NTSC Ⓗ P7402-2
3 A.PAL Ⓗ P7402-3
4 A.MESECAM Ⓗ P7402-4
5 A.SECAM Ⓗ P7402-5
6 CPSV N.PAL Ⓗ P7402-6
7 CPSV 4.43 NTSC Ⓗ P7402-7
8 CPSV SECAM Ⓗ P7402-8
9 CPSV MESECAM Ⓗ P7402-9
10 CPSV PAL Ⓗ F7402-10
11 CPSV 3.58 NTSC Ⓗ P7402-11
ER ON:ON)
-28.7
-27.9
R7510 1K
R7532 47K
C7507 50V10
5.1
22K
22K
5.2
UN2112
ON:ON)
V1
V2
OUTPUT CIRCUIT
POWER VOLTAGE DET.
5.2
5.0
IC7505 MN1280T (RESET)
C7511 0.01
SW7540 VSP0296
NTSC PB
NTSC 4.43
SECAM
MESECAM
PAL
NTSC 3.58
AUTO
+5V
7
8
9
10
11
12
13

NOTE:
DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3-25 TIMER C B A (VEP07438A) & IR RECEIVER C B A (VEP06380E)

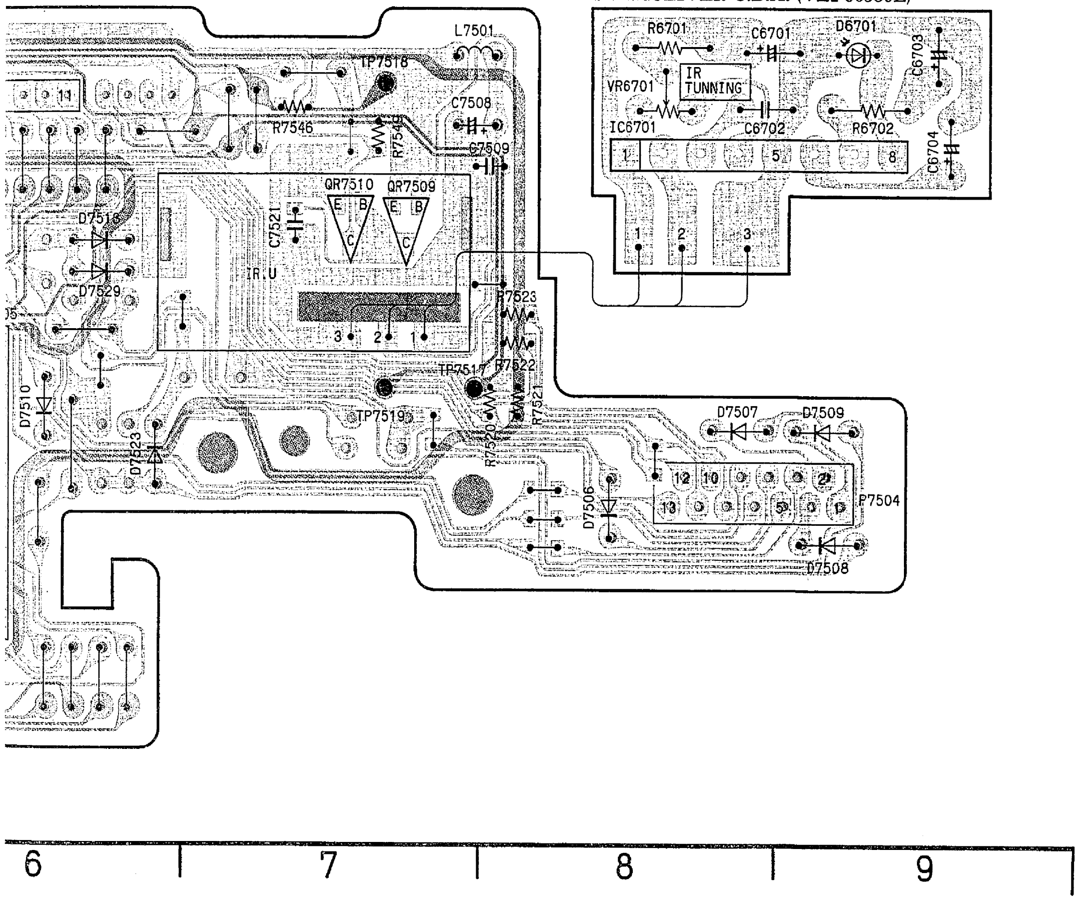

TIMER C.B.A. (VEP07438A)
C
B
A
1
2
3
4
5
6
7
P7502
P7501
P7506
P7505
R7533
R7543
R7545
C7524
R7550
R7501
X7501
X7502
C7502
C7505
C7506
C7501
TIMER CLOCK
R7546
QR7510
C7521
IR U
TP75
R7519
D7503
D7501
D7502
C7508
IC7502
R7510
R7535
C7522
C7507
C7528
IC7503
C7504
C7520
Q7501
R7509
R7507
C7510
C7511
R7506
QR7501
IC7505
R7532
QR7511
D7514
R7515
R7549
R7536
R7548
R7528
R7529
R7530
R7531
IC7501
R7503
R7502
R7504
R7505
R7524
R7525
R7526
R7513
R7514
R7511
R7527
R7512
DP7501
D7535
D7534
D7531
D7512
D7511
D7510
D7516
D7529
D7523
QR7523
QR7522
QR7521
QR7520
D7546
D7545
D7544
D7543
D7542
D7541
QR7526
QR7525
Q7502
QR7524
R7537
R7534
NTSC PB
NTSC 4.43
SECAM
MESECAM
PAL
NTSC 3.58
AUTO
SW7540
E
B
C

TIMER Section

TIMER C.B.A.	
Transistor	
Q7501	B-1
Transistor & Resistor	
QR7501	B-1
QR7502	A-1
QR7509	C-7
QR7510	C-7
QR7511	B-1
QR7520	B-4
QR7521	B-4
QR7522	B-3
QR7523	B-2
QR7524	A-2
QR7525	A-1
QR7526	A-1
Integrated Circuit	
IC6501	C-8
IC7501	B-3
IC7502	B-1
IC7503	B-1
IC7505	B-1
Test Point	
TP7517	B-7
TP7518	C-7
TP7519	B-7
Adjustment	
C7501	C-5
VR6701	C-8
Connector	
P7501	C-3
P7502	C-1
P7505	B-6
P7506	C-5

ADDRESS INFORMATION

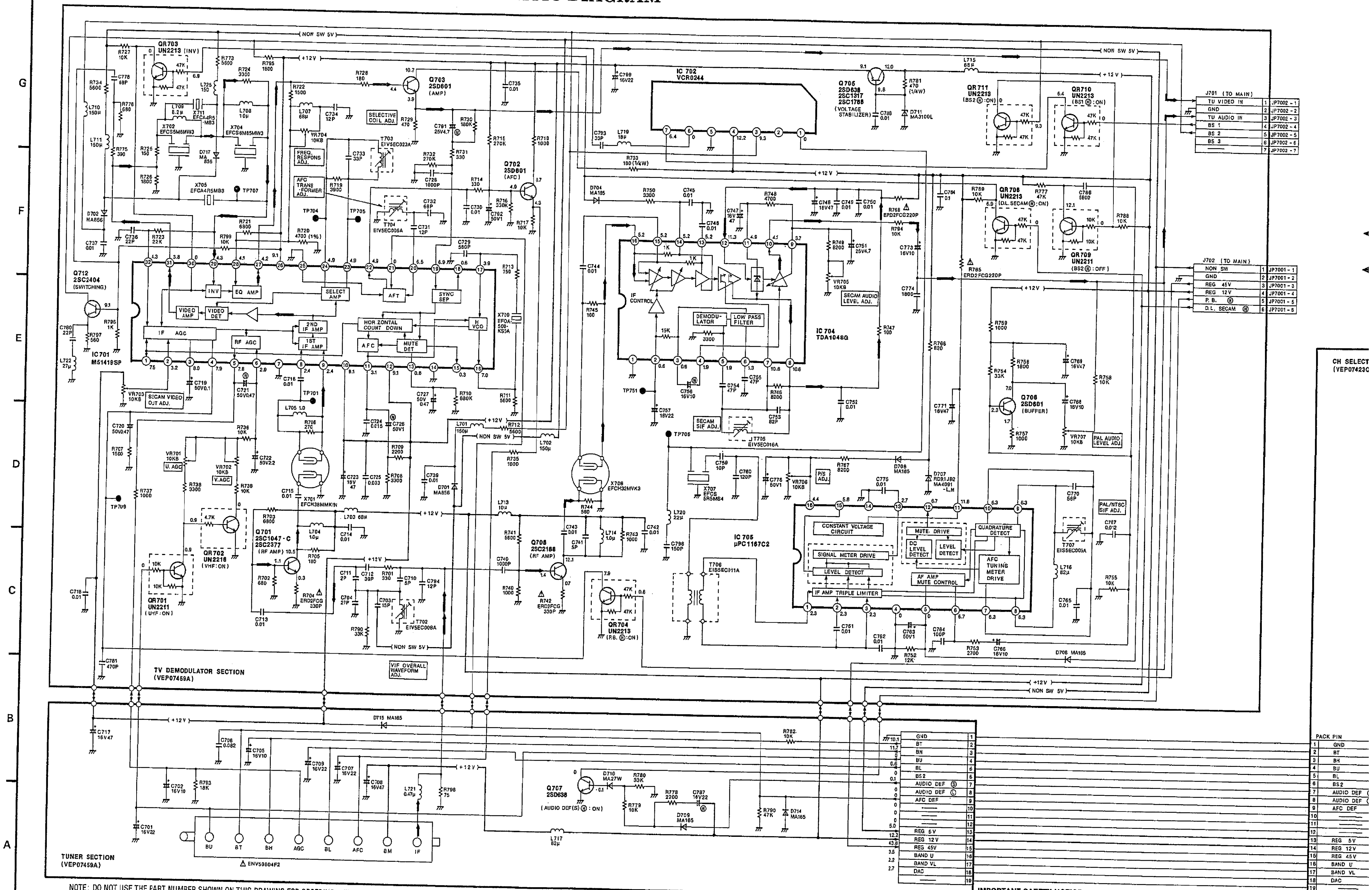
IR RECEIVER C.B.A. (VEP06380E)



L7501
TP7518
R7546
R7549
C7508
C7509
QR7510
QR7509
E
B
C
C7521
IR.U
D7516
D7529
R7523
R7522
TP7517
TP7519
R7521
R7520
D7510
D7523
D7506
D7507
D7509
D7508
P7504
12
10
2
13
5
1
3
2
1
R6701
C6701
D6701
C6703
VR6701
IR
TUNNING
IC6701
C6702
R6702
C6704
1
5
8
1
2
3
6
7
8
9

Next Page:
CH SELECT, TV DEMODULATOR
& TUNER Section

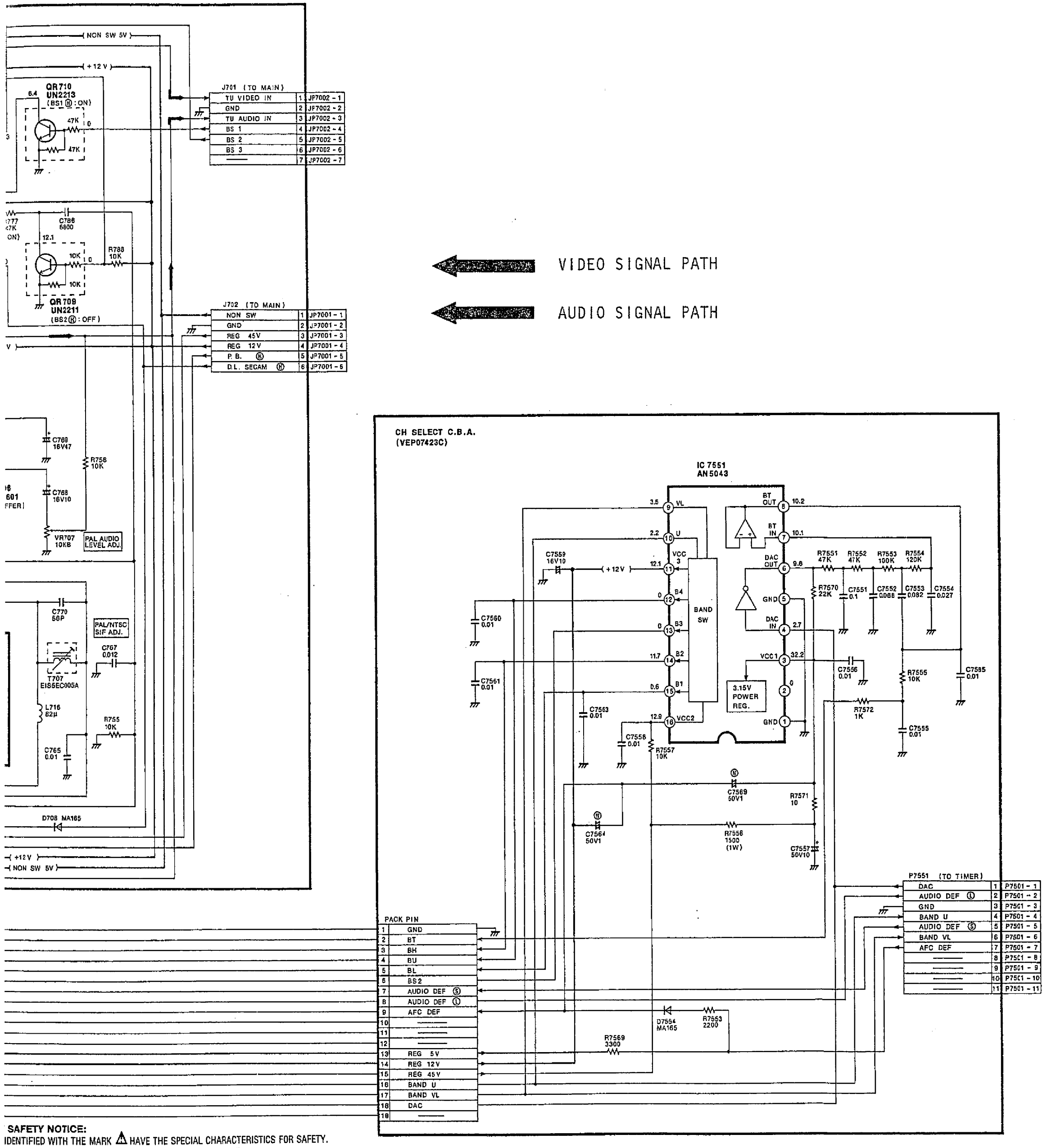
3-26. CH SELECT, TV DEMODULATOR & TUNER SCHEMATIC DIAGRAM


TV DEMODULATOR SECTION
(VEP07459A)
TUNER SECTION
(VEP07459A)
CH SELECT
(VEP07423C
IC701
M51419SP
IC 702
VCR0244
IC 704
TDA1048G
IC 705
μPC1167C2
Q701
2SC1047-C
2SC2377
(RF AMP)
Q702
2SD601
(AFC)
Q703
2SD601
(AMP)
Q705
2SD638
2SC1317
2SC1788
(VOLTAGE STABILIZER)
Q706
2SD601
(BUFFER)
Q707
2SD638
(AUDIO DEF(S) Ⓡ : ON)
Q708
2SC2188
(RF AMP)
Q712
2SC2404
(SWITCHING)
QR701
UN2211
(UHF:ON)
QR702
UN2216
(VHF:ON)
QR703
UN2213 (INV)
QR704
UN2213
(P.B. Ⓡ:ON)
QR708
UN2213
(D.L. SECAM Ⓡ : ON)
QR709
UN2211
(BS2 Ⓡ : OFF)
QR710
UN2213
(BS1 Ⓡ : ON)
QR711
UN2213
(BS2 Ⓡ : ON)
IF AGC
RF AGC
VIDEO AMP
VIDEO DET
INV
EQ AMP
SELECT AMP
AFT
SYNC SEP
H VCO
2ND IF AMP
1ST IF AMP
HOR ZONTAL COUNT DOWN
AFC
MUTE DET
IF CONTROL
DEMODU-LATOR
LOW PASS FILTER
CONSTANT VOLTAGE CIRCUIT
SIGNAL METER DRIVE
LEVEL DETECT
IF AMP TRIPLE LIMITER
MUTE DRIVE
DC LEVEL DETECT
LEVEL DETECT
QUADRATURE DETECT
AFC TUNING METER DRIVE
AF AMP MUTE CONTROL
SELECTIVE COIL ADJ.
FREQ. RESPONS ADJ.
AFC TRANS-FORMER ADJ.
SECAM VIDEO OUT ADJ.
U. AGC
V. AGC
VIF OVERALL WAVEFORM ADJ.
SECAM AUDIO LEVEL ADJ.
SECAM SIF ADJ.
P/S ADJ.
PAL/NTSC SIF ADJ.
PAL AUDIO LEVEL ADJ
NON SW 5V
+12V
J701 (TO MAIN)
1 TU VIDEO IN JP7002-1
2 GND JP7002-2
3 TU AUDIO IN JP7002-3
4 BS 1 JP7002-4
5 BS 2 JP7002-5
6 BS 3 JP7002-6
7 JP7002-7
J702 (TO MAIN)
1 NON SW JP7001-1
2 GND JP7001-2
3 REG 45V JP7001-3
4 REG 12V JP7001-4
5 P.B. Ⓡ JP7001-5
6 D.L. SECAM Ⓡ JP7001-6
1 GND
2 BT
3 BH
4 BU
5 BL
6 BS2
7 AUDIO DEF Ⓢ
8 AUDIO DEF Ⓒ
9 AFC DEF
13 REG 5V
14 REG 12V
15 REG 45V
16 BAND U
17 BAND VL
18 DAC
PACK PIN
BU BT BH AGC BL AFC BM IF
ENV59804F2
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

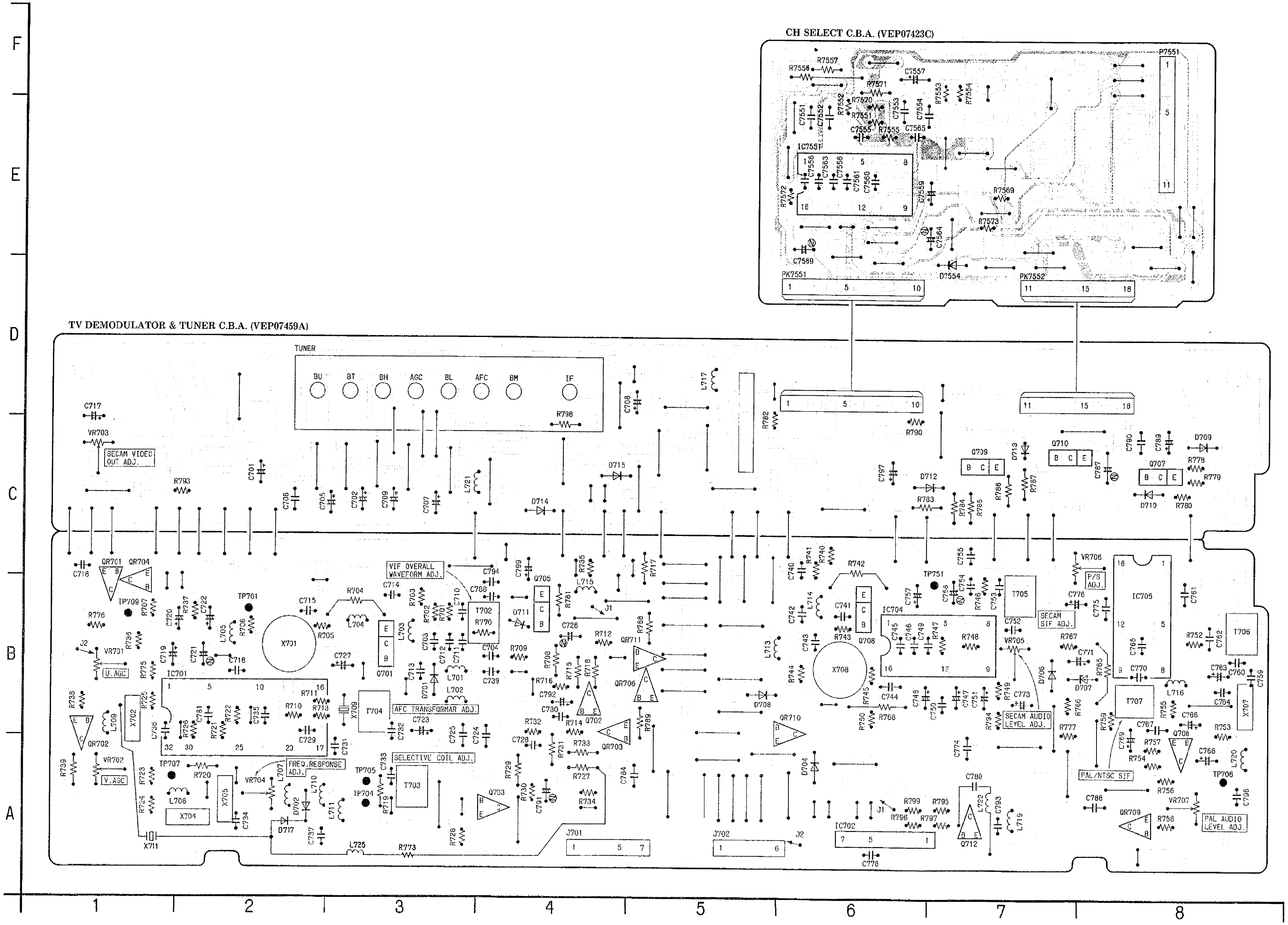
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.


VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
NON SW 5V
+12 V
QR710
UN2213
(BS1 Ⓡ : ON)
47K
QR709
UN2211
(BS2 Ⓡ : OFF)
C786
5600
R788
10K
J701 (TO MAIN)
TU VIDEO IN
GND
TU AUDIO IN
BS 1
BS 2
BS 3
JP7002 - 1
JP7002 - 7
J702 (TO MAIN)
NON SW
GND
REG 45V
REG 12V
P. B. Ⓡ
D.L. SECAM Ⓡ
JP7001 - 1
JP7001 - 6
C789
16V47
R756
10K
C768
16V10
VR707
10KB
PAL AUDIO LEVEL ADJ.
C770
56P
PAL/NTSC SIF ADJ.
C767
0.012
T707
EIS5EC005A
L716
82μ
R755
10K
C765
0.01
D708 MA165
CH SELECT C.B.A.
(VEP07423C)
IC 7551
AN5043
VL
U
VCC 3
B4
B3
B2
B1
VCC2
BAND SW
BT OUT
BT IN
DAC OUT
GND
DAC IN
VCC1
3.15V POWER REG.
C7559
16V10
C7560
0.01
C7561
0.01
C7563
0.01
C7558
0.01
R7557
10K
R7551
47K
R7552
47K
R7553
100K
R7554
120K
R7570
22K
C7551
0.1
C7552
0.068
C7553
0.082
C7554
0.027
C7556
0.01
R7572
1K
R7555
10K
C7555
0.01
C7585
0.01
C7569
50V1
R7571
10
C7564
50V1
R7556
1500
(1W)
C7557
50V10
P7551 (TO TIMER)
DAC
AUDIO DEF Ⓛ
GND
BAND U
AUDIO DEF Ⓢ
BAND VL
AFC DEF
P7501 - 1
P7501 - 11
PACK PIN
GND
BT
BH
BU
BL
BS2
AUDIO DEF Ⓢ
AUDIO DEF Ⓛ
AFC DEF
REG 5V
REG 12V
REG 45V
BAND U
BAND VL
DAC
D7554
MA165
R7563
2200
R7569
3300
10
11
12
13
14
15

SAFETY NOTICE:
IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
ING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

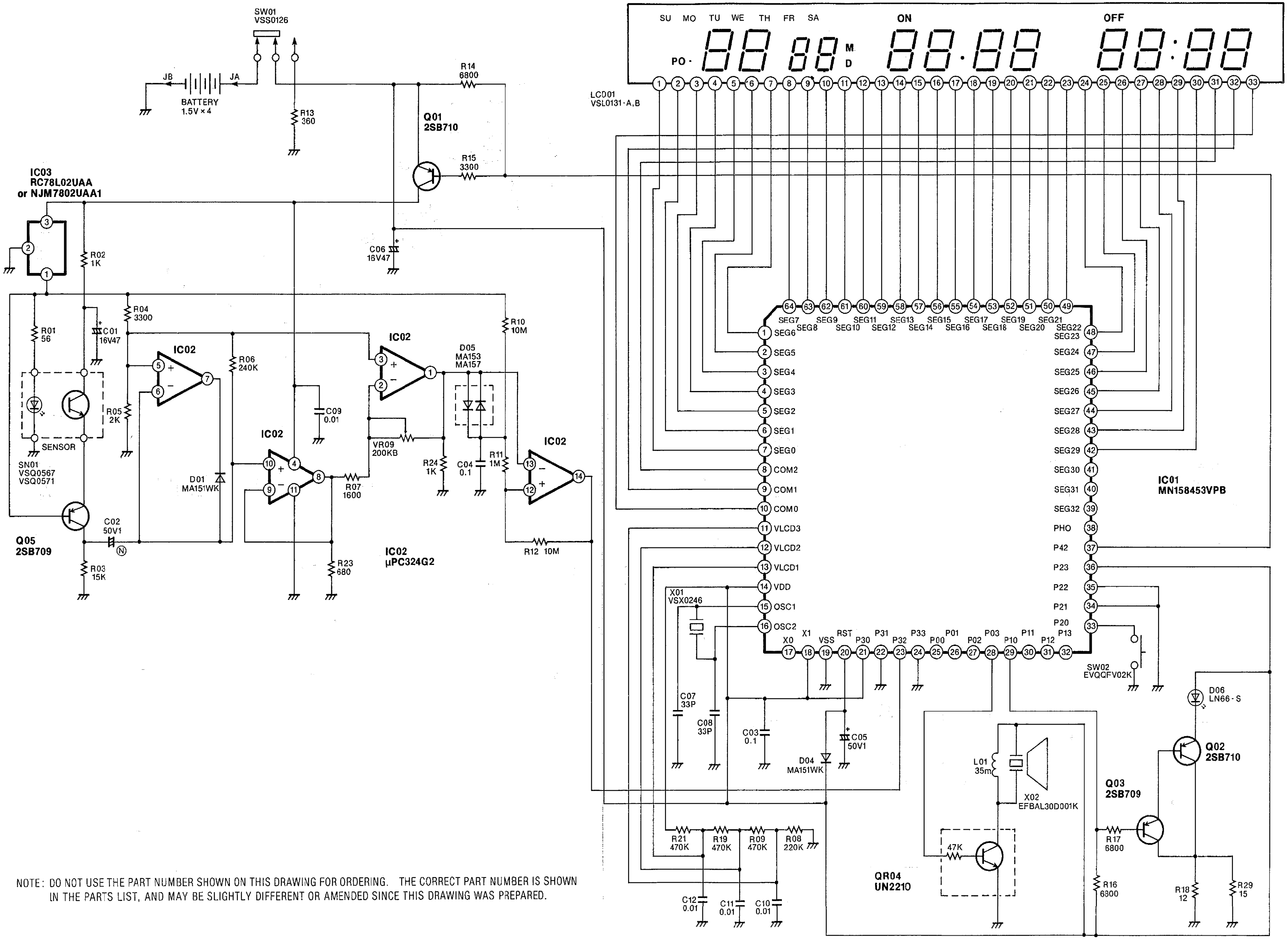
3-27 CH SELECT C B A (VEP07423C), TV DEMODULATOR & TUNER C B A. (VEP07459A)


CH SELECT C.B.A. (VEP07423C)
TV DEMODULATOR & TUNER C.B.A. (VEP07459A)
TUNER
BU
BT
BH
AGC
BL
AFC
BM
IF
SECAM VIDEO OUT ADJ.
VIF OVERALL WAVEFORM ADJ.
AFC TRANSFORMAR ADJ.
SELECTIVE COIL ADJ.
FREQ.RESPONSE ADJ.
V.AGC
U.AGC
P/S ADJ.
SECAM SIF ADJ.
SECAM AUDIO LEVEL ADJ.
PAL/NTSC SIF
PAL AUDIO LEVEL ADJ.
IC701
IC702
IC704
IC705
IC7551
PK7551
PK7552
P7551
J701
J702
X701
X708
T702
T703
T704
T705
T706
T707
F
E
D
C
B
A
1
2
3
4
5
6
7
8

CH SELECT C.B.A., TV DEMODULATOR & TUNER C.B.A.	
Transistor	
Q701	B-3
Q702	B-4
Q703	A-4
Q705	B-4
Q706	B-8
Q707	C-8
Q708	B-6
Q709	C-7
Q710	C-7
Q712	A-7
Transistor & Resistor	
QR701	C-1
QR702	A-1
QR703	A-4
QR704	C-1
QR706	B-5
QR709	A-8
QR710	B-6
QR711	B-5
Integrated Circuit	
IC701	B-2
IC702	A-6
IC704	B-6
IC705	B-8
IC7551	E-6
Test Point	
TP701	B-2
TP704	A-3
TP705	A-3
TP706	A-8
TP707	A-1
TP709	B-1
TP751	B-7
Adjustment	
T702	B-4
T703	A-3
T704	B-3
T705	B-7
T707	B-8
VR701	B-1
VR702	A-1
VR703	C-1
VR704	A-2
VR705	B-7
VR706	C-8
VR707	A-8
Connector	
J701	A-4
J702	A-5
P7551	F-8
PK7551	D-6
PK7552	D-7

ADDRESS INFORMATION

3-28 DIGITAL SCANNER SCHEMATIC DIAGRAM —UNIT NO.: VEQ0705—

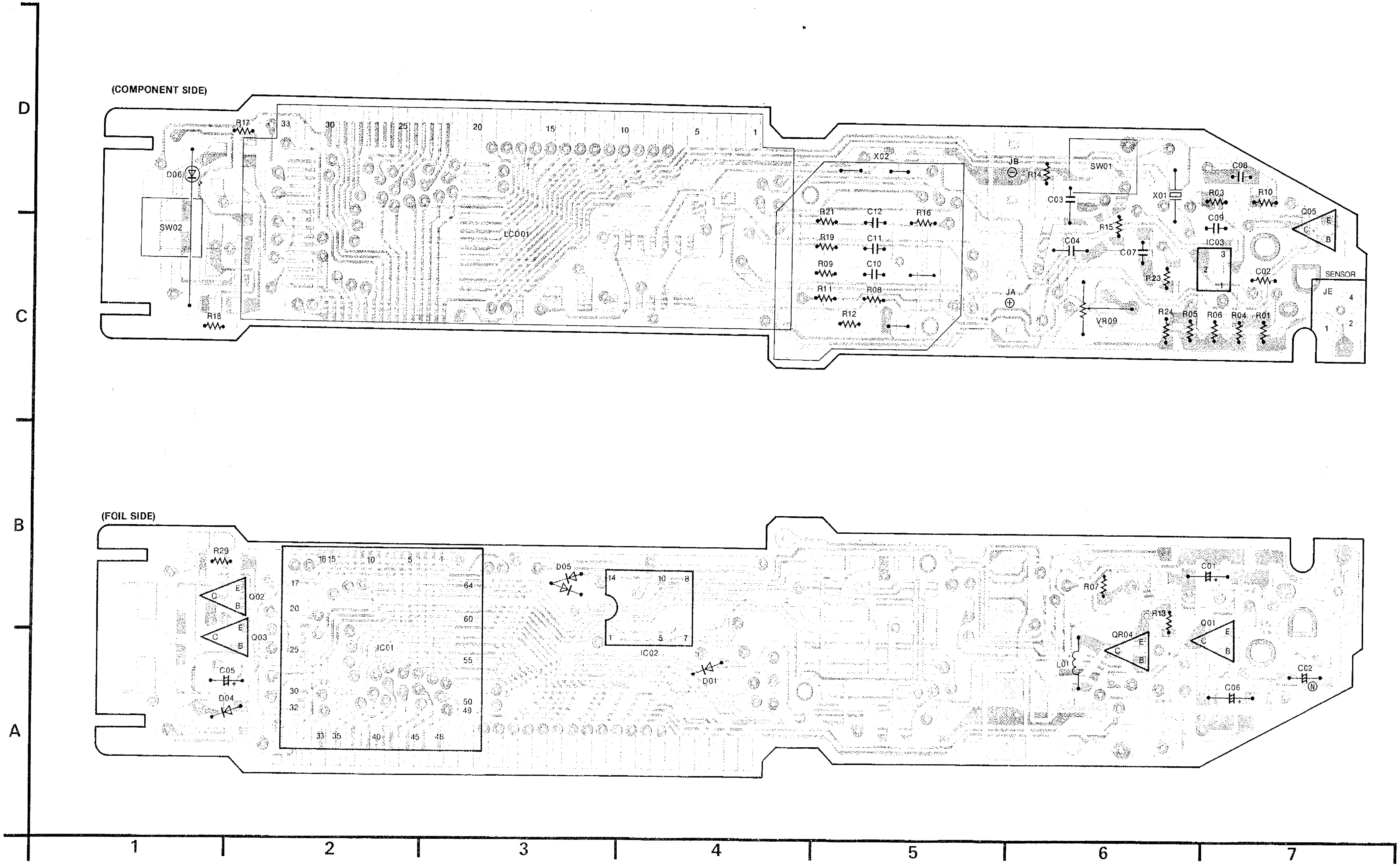


SW01
VSS0126
JB
JA
BATTERY
1.5V × 4
R13
360
R14
6800
Q01
2SB710
R15
3300
IC03
RC78L02UAA
or NJM7802UAA1
R02
1K
C06
16V47
R01
56
C01
16V47
R04
3300
IC02
R05
2K
SENSOR
SN01
VSQ0567
VSQ0571
D01
MA151WK
R06
240K
C09
0.01
IC02
VR09
200KB
R07
1600
D05
MA153
MA157
R10
10M
R24
1K
C04
0.1
R11
1M
IC02
R12 10M
Q05
2SB709
C02
50V1
R03
15K
R23
680
IC02
μPC324G2
SU MO TU WE TH FR SA
ON
OFF
PO·
M
D
LCD01
VSL0131-A,B
SEG6
SEG7
SEG8
SEG9
SEG10
SEG11
SEG12
SEG13
SEG14
SEG15
SEG16
SEG17
SEG18
SEG19
SEG20
SEG21
SEG22
SEG23
SEG5
SEG4
SEG3
SEG2
SEG1
SEG0
COM2
COM1
COM0
VLCD3
VLCD2
VLCD1
VDD
OSC1
OSC2
X0
X1
VSS
RST
P30
P31
P32
P33
P00
P01
P02
P03
P10
P11
P12
P13
SEG24
SEG25
SEG26
SEG27
SEG28
SEG29
SEG30
SEG31
SEG32
PHO
P42
P23
P22
P21
P20
IC01
MN158453VPB
X01
VSX0246
C07
33P
C08
33P
C03
0.1
C05
50V1
D04
MA151WK
SW02
EVQQFV02K
D06
LN66-S
Q02
2SB710
L01
35m
X02
EFBAL30D001K
Q03
2SB709
R17
6800
47K
QR04
UN2210
R16
6800
R18
12
R29
15
R21
470K
R19
470K
R09
470K
R08
220K
C12
0.01
C11
0.01
C10
0.01

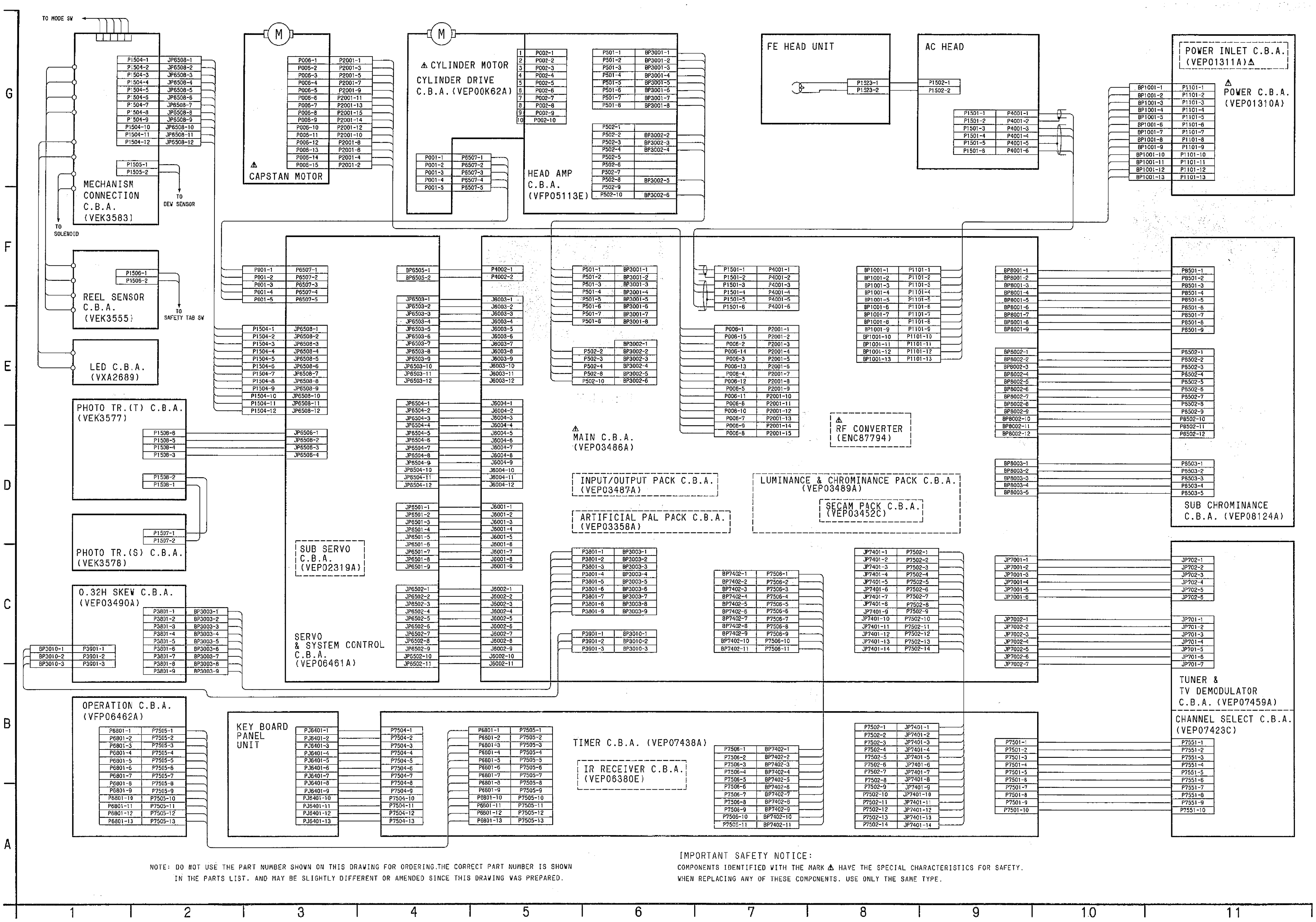
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
CH SELECT, TV DEMODULATOR
& TUNER Section

3-29. DIGITAL SCANNER C B.A (VEP66039B)


(COMPONENT SIDE)
(FOIL SIDE)
D
C
B
A
1
2
3
4
5
6
7
R17
D06
SW02
R18
LCD01
X02
R21
C12
R16
R19
C11
R09
C10
R11
R08
R12
JB
R14
SW01
C03
X01
R03
R10
C08
C09
Q05
R15
C04
C07
IC03
R23
C02
SENSOR
JE
JA
VR09
R24
R05
R06
R04
R01
R29
Q02
Q03
C05
D04
IC01
D05
IC02
D01
R07
R13
QR04
L01
Q01
C01
C06
C02
E
B
C

3-33 INTERCONNECTION SCHEMATIC DIAGRAM


TO MODE SW
MECHANISM CONNECTION C.B.A. (VEK3583)
TO DEW SENSOR
TO SOLENOID
REEL SENSOR C.B.A. (VEK3555)
TO SAFETY TAB SW
LED C.B.A. (VXA2689)
PHOTO TR.(T) C.B.A. (VEK3577)
PHOTO TR.(S) C.B.A. (VEK3578)
0.32H SKEW C.B.A. (VEP03490A)
OPERATION C.B.A. (VFP06462A)
CAPSTAN MOTOR
CYLINDER MOTOR
CYLINDER DRIVE C.B.A. (VEP00K62A)
HEAD AMP C.B.A. (VFP05113E)
FE HEAD UNIT
AC HEAD
POWER INLET C.B.A. (VEP01311A)
POWER C.B.A. (VEP01310A)
SUB SERVO C.B.A. (VEP02319A)
SERVO & SYSTEM CONTROL C.B.A. (VEP06461A)
MAIN C.B.A. (VEP03486A)
INPUT/OUTPUT PACK C.B.A. (VEP03487A)
ARTIFICIAL PAL PACK C.B.A. (VEP03358A)
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489A)
SECAM PACK C.B.A. (VEP03452C)
RF CONVERTER (ENC87794)
SUB CHROMINANCE C.B.A. (VEP08124A)
TUNER & TV DEMODULATOR C.B.A. (VEP07459A)
CHANNEL SELECT C.B.A. (VEP07423C)
KEY BOARD PANEL UNIT
TIMER C.B.A. (VEP07438A)
IR RECEIVER C.B.A. (VEP06380E)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
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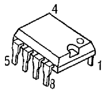
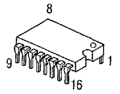
3-34 ICs & TRs INFORMATION

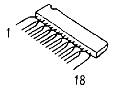
GENERAL CIRCUIT PARTS



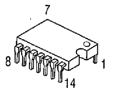
AN6562
AN6914



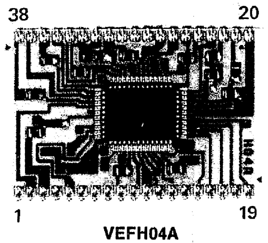
AN5043
TDA1048G
TL8705P
μPC1167C2
μPD4053BC



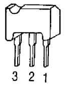
BA7025L



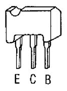
MN74HC08N
μPD4013BC



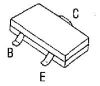
VEFH04A
VEFH04B



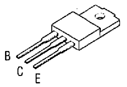
MN1220
MN1280
MN1280P
MN1280R



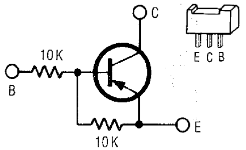
2SA1547
2SB641
2SB643
2SC2188
2SC2206
2SD1330
2SD636
2SD638
2SD973

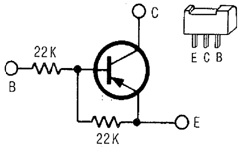


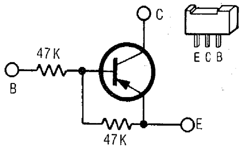
2SB709
2SC2295
2SC2404
2SD601

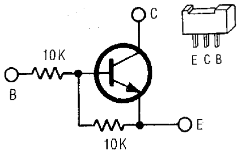


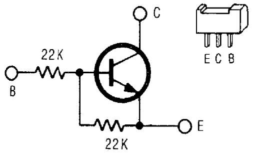
2SD1273P
2SD1275

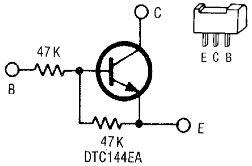

C
E C B
10K
B
E
10K
DTA114EA
UN1111

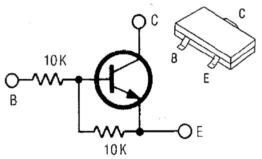

C
E C B
22K
B
E
22K
DTA124EA
UN1112

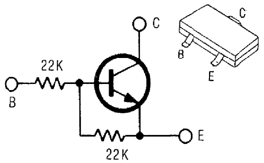

C
E C B
47K
B
E
47K
DTA144EA
UN1113

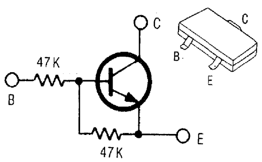

C
E C B
10K
B
E
10K
DTC114EA
UN1211

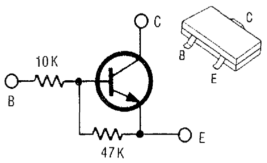

C
E C B
22K
B
E
22K
DTC124EA
UN1212

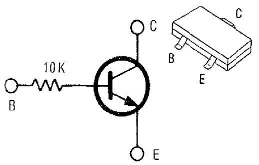

C
E C B
47K
B
E
47K
DTC144EA
UN1213


C
C
10K
B
B
E
E
10K
UN2211

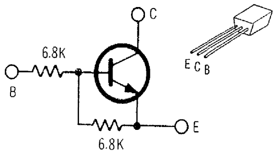

C
C
22K
B
B
E
E
22K
UN2212


C
C
47K
B
B
E
E
47K
UN2213


C
C
10K
B
B
E
E
47K
UN2214

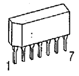


UN2215

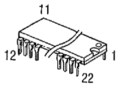

C
6.8K
B
E C B
E
6.8K
2SD1676

Back Page:
INTERCONNECTION Section

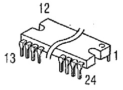
MAIN



AN3396



BU3761S



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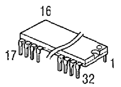
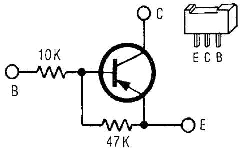
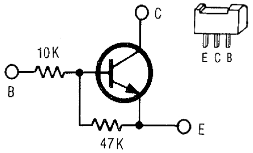
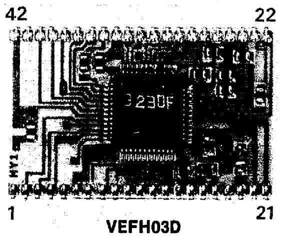


BA7766S

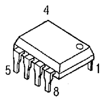

C
E C B
10K
B
E
47K
DTA114YA
UN1114


C
E C B
10K
B
E
47K
DTC114YA
UN1214

LUMINANCE & CHROMINANCE PACK

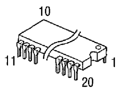


VEFH03D

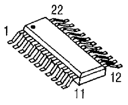


MSM6965-3RS

HEAD AMP

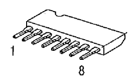


AN3224K



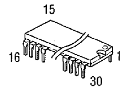
AN3311S

0 32H SKEW



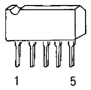
BA7001

SUB CHROMINANCE



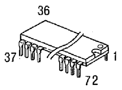
BA7107S

INPUT/OUTPUT PACK

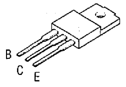


BA7004

SERVO & SYSTEM CONTROL

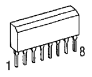


MN6740VCZK



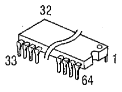
2SD983

IR RECEIVER

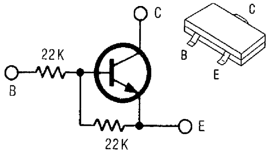


μPC1490HA

TIMER



M50935V4AB


C
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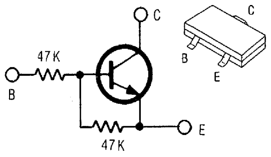
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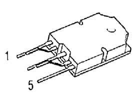
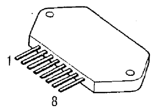
E
E
47K
UN2213

POWER SUPPLY

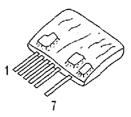


STRD1806E

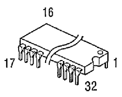


STK5339B

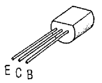
TV DEMODULATOR



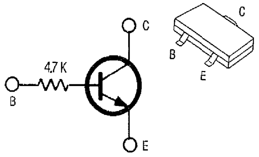
H8D1742A



M51419SP

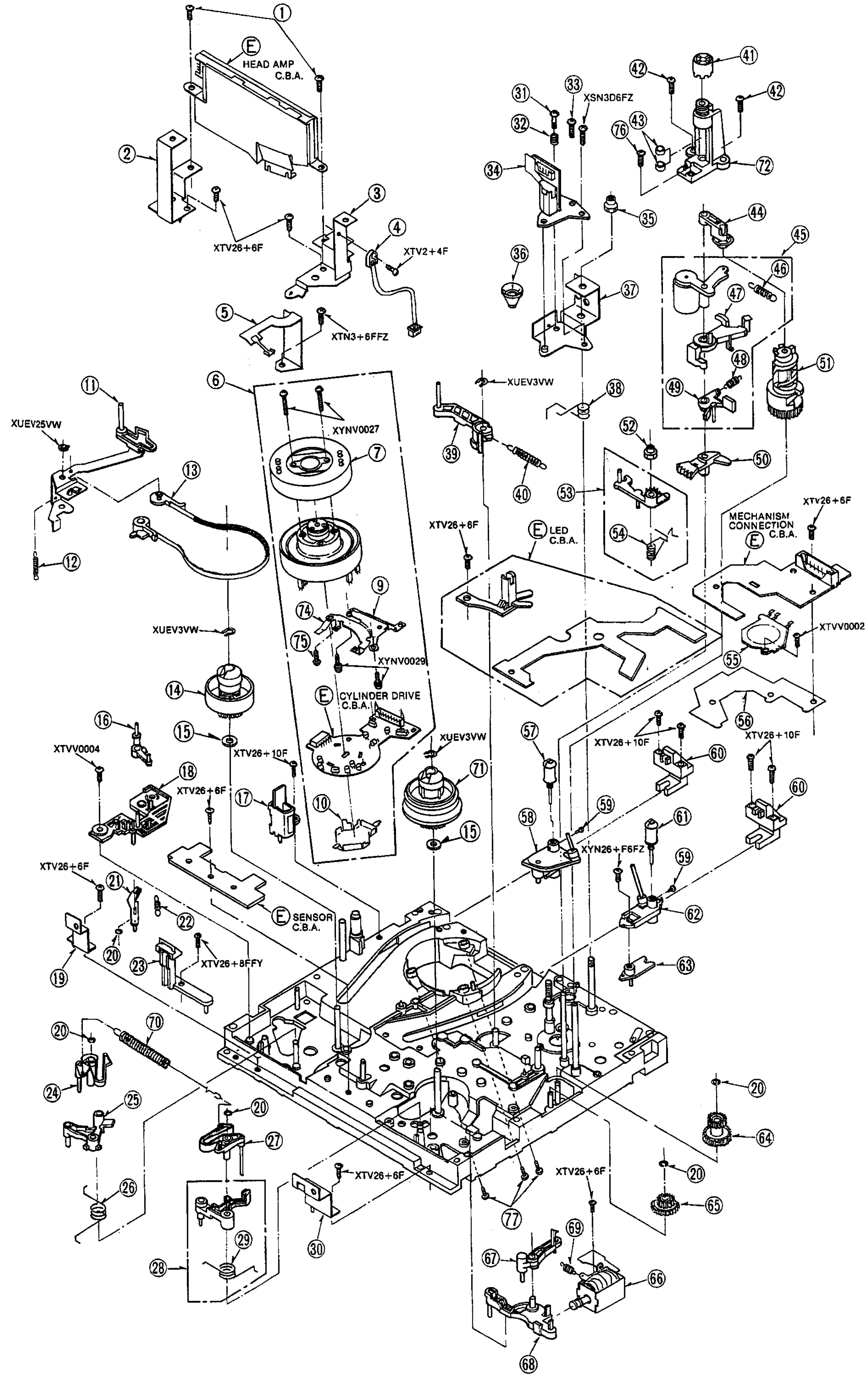


2SC1047



UN2216

SECTION 4
EXPLODED VIEWS & PARTS LIST
4-1. EXPLODED VIEW ❶ CHASSIS PARTS SECTION (1)



①
Ⓔ HEAD AMP C.B.A.
②
XTV26+6F
③
④
XTV2+4F
⑤
XTN3+6FFZ
⑥
XYNV0027
⑦
⑨
⑪
XUEV25VW
⑫
⑬
XUEV3VW
⑭
⑮
⑯
XTVV0004
⑰
⑱
XTV26+6F
XTV26+10F
⑩
⑲
⑳
㉑
㉒
㉓
XTV26+8FFY
Ⓔ SENSOR C.B.A.
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XSN3D6FZ
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XUEV3VW
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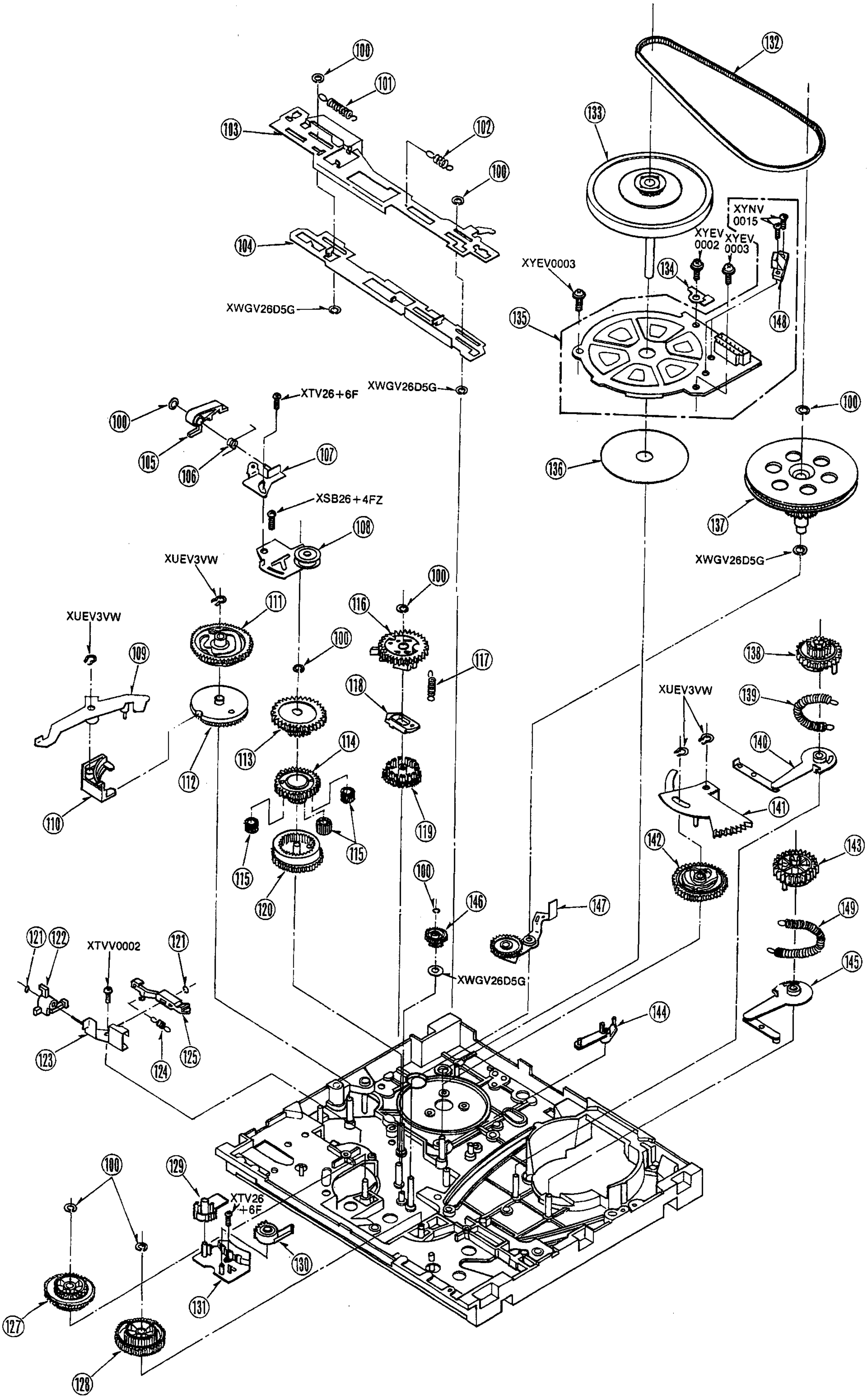
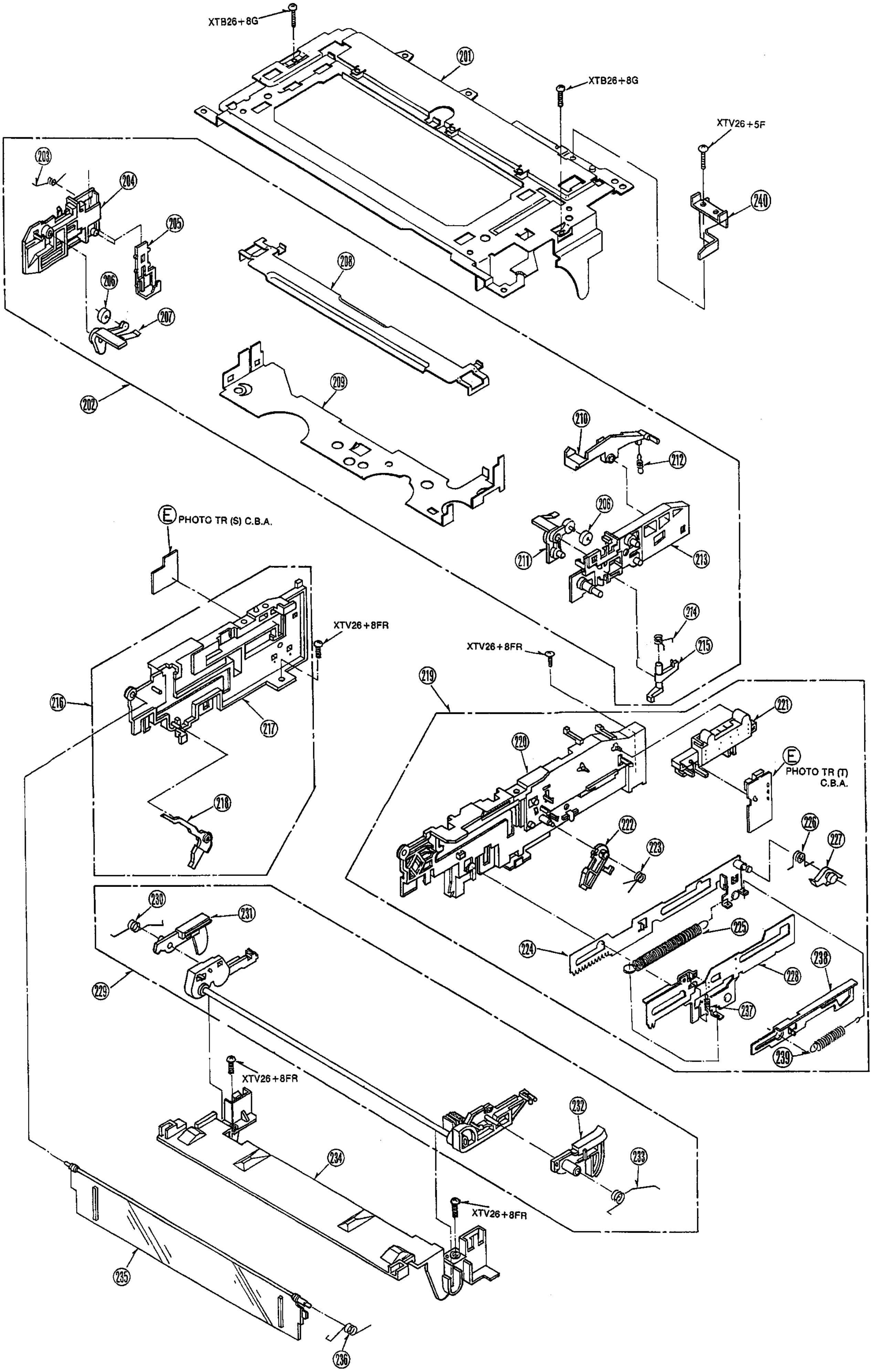
(76)
(77)
XYNV0029
Ⓔ CYLINDER DRIVE C.B.A.
XUEV3VW
Ⓔ LED C.B.A.
MECHANISM CONNECTION Ⓔ C.B.A.
XTV26+6F
XTVV0002
XTV26+10F
XYN26+F6FZ
XTV26+6F

❷ CHASSIS PARTS SECTION (2)



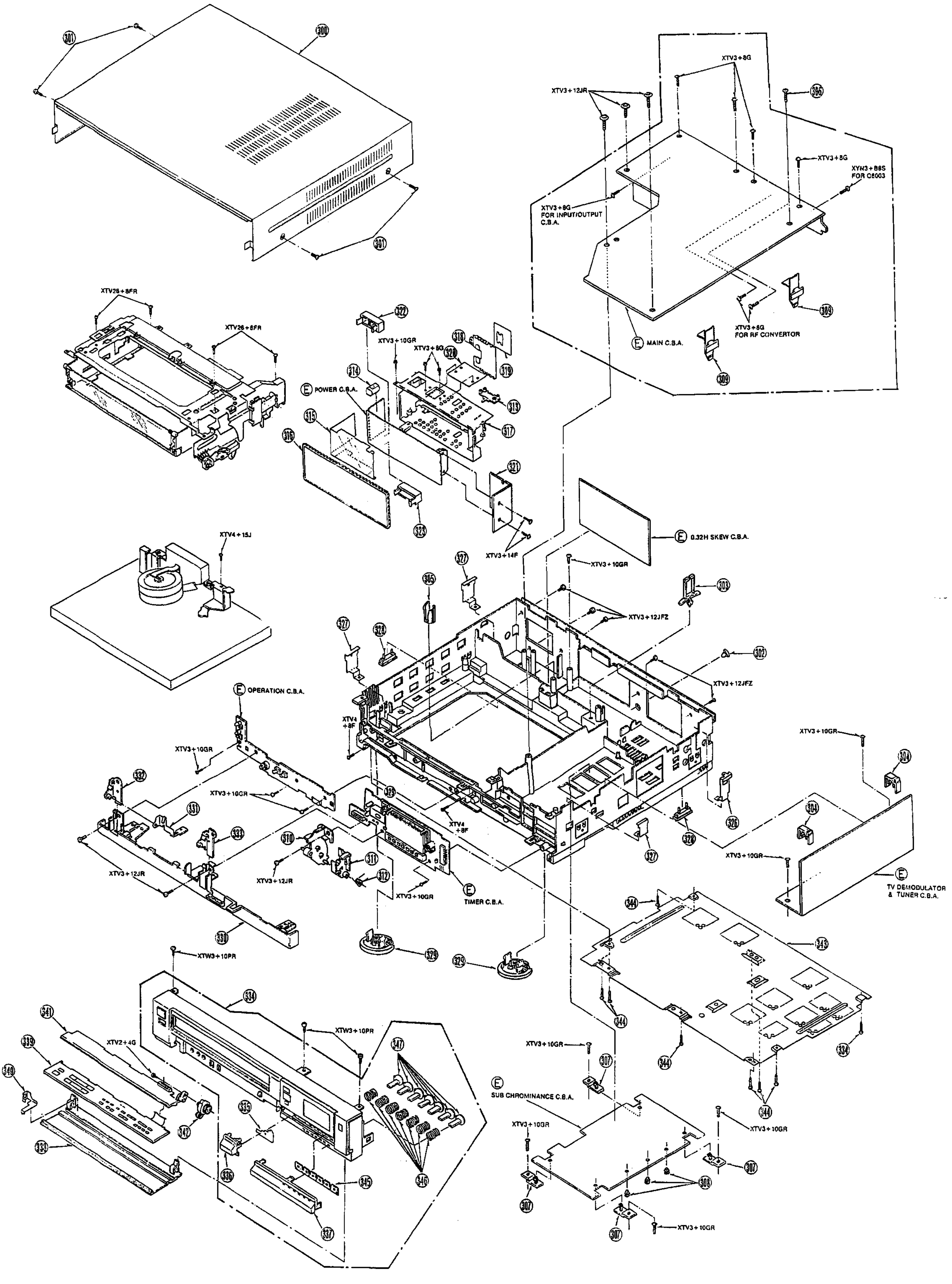
132
100
101
103
102
133
100
XYNV
0015
XYEV
0002
XYEV
0003
104
XYEV0003
134
XWGV26D5G
135
148
XWGV26D5G
XTV26+6F
100
100
105
106
107
136
137
XSB26+4FZ
108
XWGV26D5G
XUEV3VW
100
XUEV3VW
116
111
109
100
138
117
118
XUEV3VW
139
113
140
112
114
110
119
141
115
115
142
143
120
100
146
147
149
121
122
XTVV0002
121
XWGV26D5G
145
144
123
124
125
100
129
XTV26
+6F
130
131
127
128

❸ CASSETTE UP MECHANISM SECTION

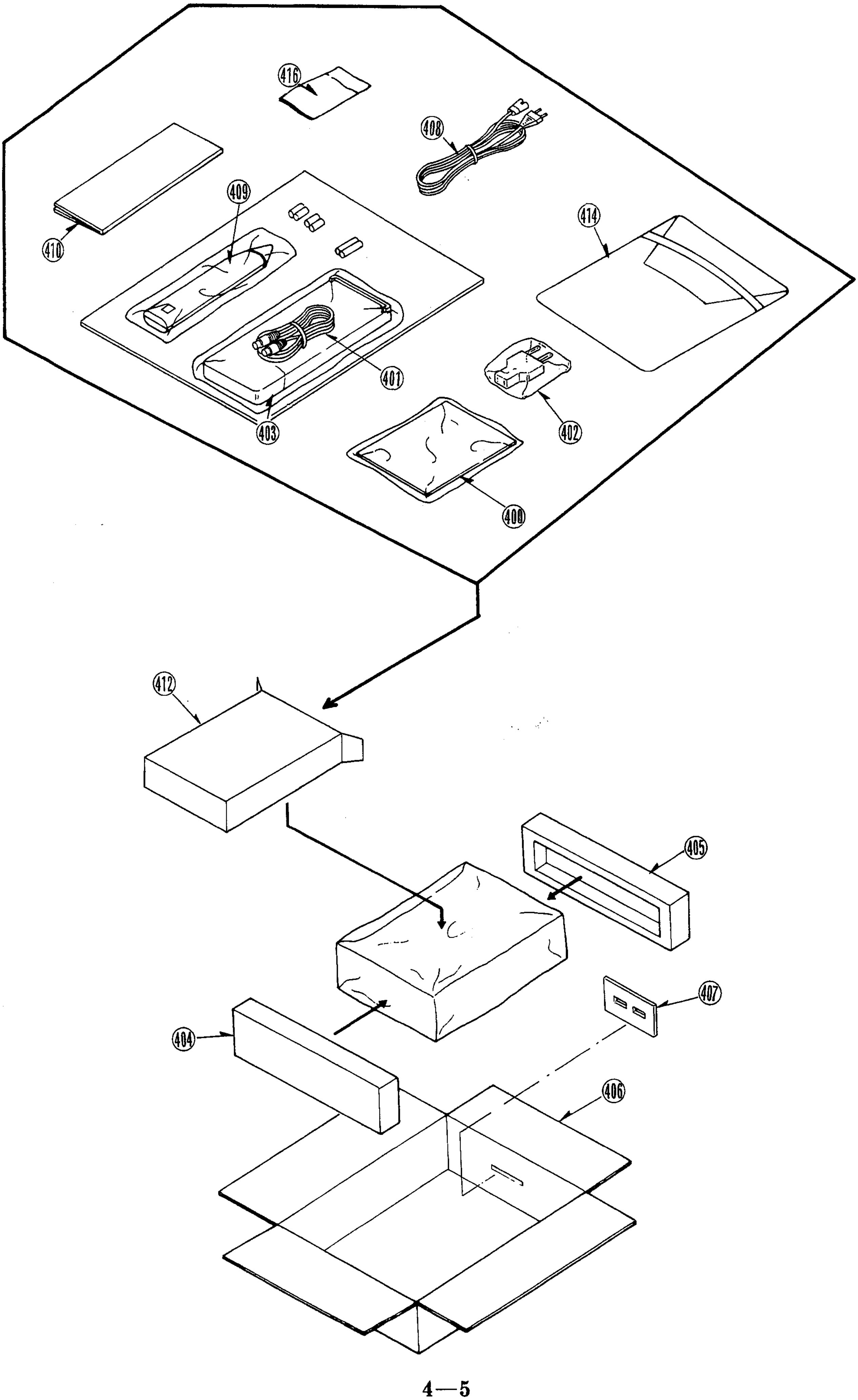


XTB26+8G
201
XTB26+8G
XTV26+5F
240
203
204
205
206
207
208
202
209
210
212
206
211
213
E PHOTO TR (S) C.B.A.
XTV26+8FR
214
215
XTV26+8FR
219
216
217
221
220
E PHOTO TR (T) C.B.A.
218
222
223
226
227
230
231
225
224
238
228
229
237
239
XTV26+8FR
232
233
234
XTV26+8FR
235
236

❹ CASING PARTS SECTION


301
300
301
XTV3+8G
XTV3+12JR
306
XTV3+8G
XYN3+B8S
FOR Q6003
XTV3+8G
FOR INPUT/OUTPUT
C.B.A.
309
XTV3+8G
FOR RF CONVERTOR
E MAIN C.B.A.
309
XTV26+8FR
XTV26+8FR
322
XTV3+10GR
XTV3+8G
318
320
319
314
E POWER C.B.A.
313
315
316
317
321
323
XTV3+14F
E 0.32H SKEW C.B.A.
XTV4+15J
XTV3+10GR
327
305
303
XTV3+12JFZ
327
328
302
XTV3+12JFZ
E OPERATION C.B.A.
XTV4
+8F
XTV3+10GR
304
XTV3+10GR
332
XTV3+10GR
331
333
329
XTV4
+8F
304
326
310
311
328
327
XTV3+10GR
XTV3+12JR
XTV3+12JR
312
XTV3+10GR
E TIMER C.B.A.
E
TV DEMODULATOR
& TUNER C.B.A.
344
343
330
329
329
XTW3+10PR
334
341
344
XTW3+10PR
339
XTV2+4G
347
XTV3+10GR
344
334
340
307
E
SUB CHROMINANCE C.B.A.
342
335
344
XTV3+10GR
XTV3+10GR
338
336
346
345
307
308
307
337
307
XTV3+10GR

❺ PACKING PARTS SECTION



416
408
409
410
414
401
403
402
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412
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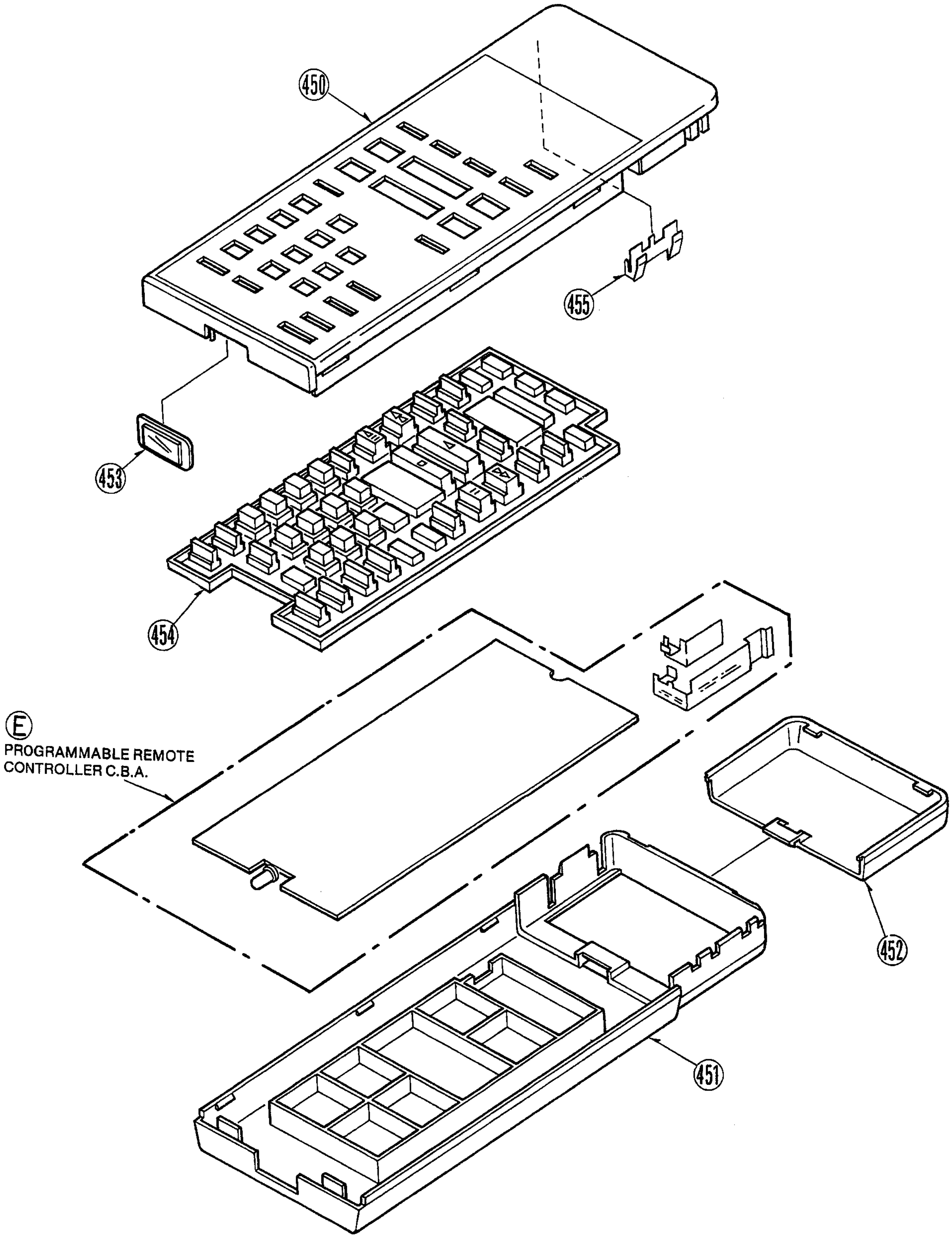
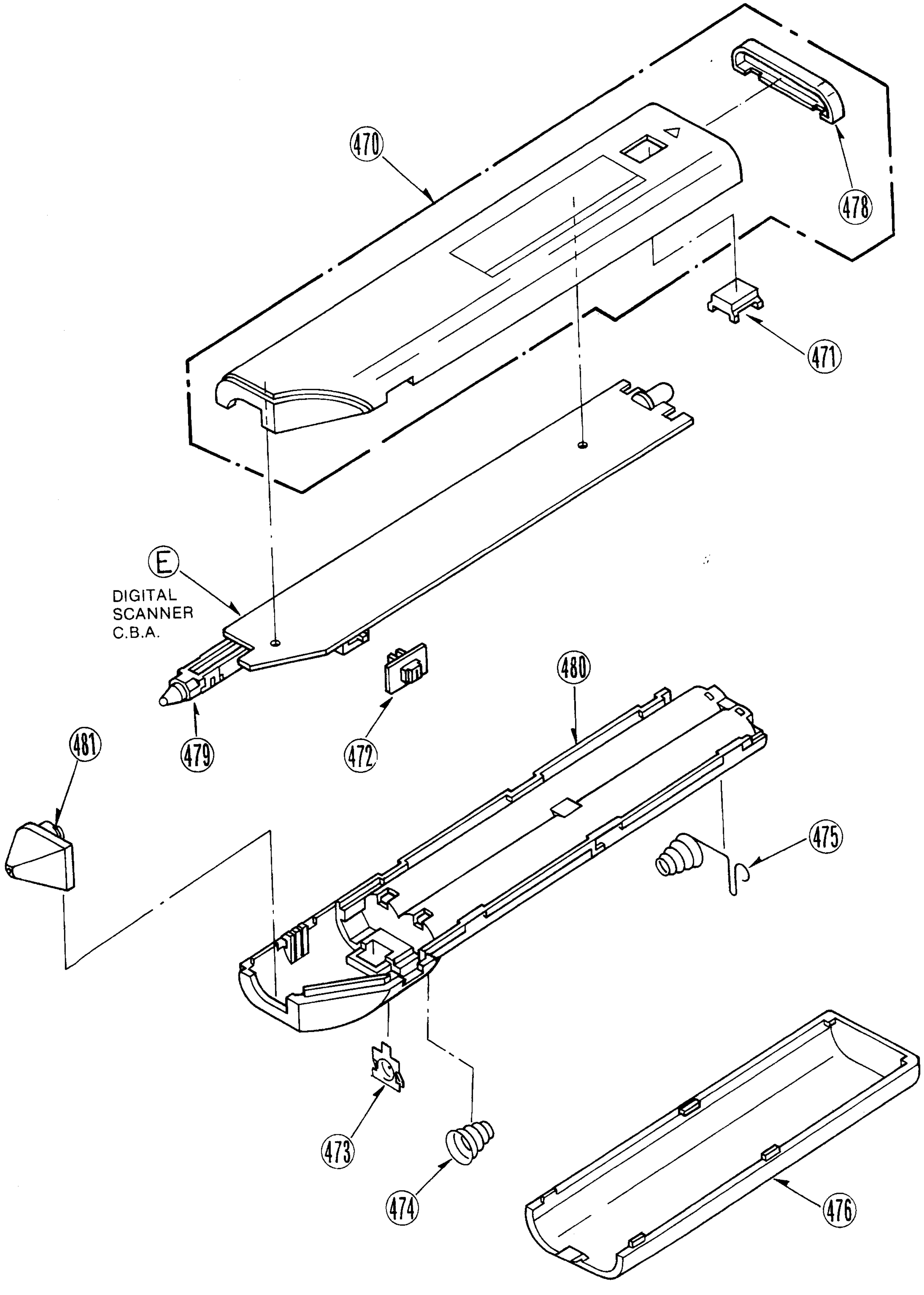
406

❻ REMOTE CONTROLLER UNIT


450
455
453
454
Ⓔ
PROGRAMMABLE REMOTE
CONTROLLER C.B.A.
452
451

❼ DIGITAL SCANNER


470
478
471
E
DIGITAL
SCANNER
C.B.A.
479
472
480
481
475
473
474
476

Memo

PARTS LIST

MODEL NO: NV-G500EM

1.NV-G500EM Mechanical Replacement Parts List

※This parts list is detachable from the manual.

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0141	HEAD AMP SET SCREW	2	
2(1)		VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
4(1)		VEK3185	DEW SENSOR UNIT	1	
5(1)		VXA2702	EARTH PLATE UNIT	1	
6(1)		VEG0626	CYLINDER UNIT	1	<!>
7(1)		VEH0400	UPPER CYLINDER UNIT	1	
9(1)		VMA6884	MAIN HOLDER UNIT	1	
10(1)		VSC2188	CYLINDER C.B.A SHIELD PLATE	1	
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0225	TENSION BAND UNIT	1	
14(1)		VXR0145	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER (0.5mm)	2	
15(1)		VMX1239	REEL WASHER (0.3mm)	2	
15(1)		VMX1238	REEL WASHER (0.2mm)	2	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	3	
21(1)		VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0350	SAFETY SW	1	
24(1)		VXZ0229	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0228	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0231	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VBR0132	A/C HEAD	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0050	ADJUST NUT	1	
37(1)		VXA2675	HEAD BASE UNIT	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1480	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	2	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1743	PRESSURE ROLLER UNIT	1	
46(1)		VMB1568	PIN PRESSURE SPRING	1	
47(1)		VML1873	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE	1	
			SPRING		
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0357	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHN0023	M3 NYLON NUT	1	
53(1)		VXL1485	P5 UNIT	1	
54(1)		VMB1554	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
56(1)		VSC1851	SHIELD PLATE	1	
57(1)		VXP0863	ROLLER POST UNIT	1	
58(1)		VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP0764A	ROLLER POST UNIT	1	
62(1)		VXA2686	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0332	CONNECTION GEAR	1	
66(1)		VXA2693	SOLENOID	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML1849	SOLENOID LEVER (1) UNIT	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB1565	MAIN BRAKE SPRING	1	
71(1)		VXR0146	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
74(1)		VSC1843	HEAT SINK PLATE	1	
75(1)		VHD0329	HEAT SINK SCREW	1	
76(1)		VHD0374	HOUSING SCREW	1	
77(1)		VHD0342	CYLINDER MOUNT SCREW	3	
100(2)		VMX1079	CUT WASHER	9	
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA2701	MAIN LEVER (1) UNIT	1	
104(2)		VMM0160	SUB LEVER	1	
105(2)		VXL1500	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA2707	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA2674	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0346	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0349	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP0923	TAKE UP REEL GEAR UNIT	1	
128(2)		VDG0445	SUPPLY REEL GEAR	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP0777	ROTOR UNIT	1	
134(2)		VMA6998	ROTOR STOPPER	1	
135(2)		VEK2944	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0917	CENTRE PULLEY UNIT	1	
138(2)		VDG0420	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3144	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0336	INTERMEDIATE GEAR	1	
147(2)		VXL1490	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
201(3)		VMA7223	TOP PLATE	1	
202(3)		VXA2679	CASSETTE HOLDER UNIT	1	
203(3)		VMB1573	MOUNT LEVER SPRING	1	
204(3)		VMD0919	HOLDER GUIDE (L)	1	
205(3)		VMM0163	MOUNT LEVER	1	
206(3)		VDP1077	ROLLER	2	
207(3)		VML1883	PRESSURE LEVER (L)	1	
208(3)		VMA6902	HOLDER ANGLE	1	
209(3)		VMA6901	CASSETTE HOLDER	1	
210(3)		VML1882	OPENER LEVER	1	
211(3)		VML1884	PRESSURE LEVER (R)	1	
212(3)		VMB1584	OPENER LEVER SPRING	1	
213(3)		VMD0920	HOLDER GUIDE (R)	1	
214(3)		VMB1576	RELEASE SPRING	1	
215(3)		VML1881	RELEASE LEVER	1	
216(3)		VXA2676	SIDE PLATE (L) UNIT	1	
217(3)		VMD0917	SIDE PLATE (L)	1	

To guarantee the FUNCTION, SAFETY and RELIABLITY of repaired units, only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
218(3)	VML1880	OPENER LEVER	1	
219(3)	VXA3171	SIDE PLATE (R) UNIT	1	
220(3)	VMD0918	SIDE PLATE (R)	1	
221(3)	VSS0176	SLIDE SW	1	
222(3)	VML1886	DOWN SUPPORT LEVER	1	
223(3)	VMB1575	DOWN SUPPORT SPRING	1	
224(3)	VXA3148	RACK (A)(1) UNIT	1	
225(3)	VMB1778	CLUTCH SPRING	1	
226(3)	VMB1772	LOCK SPRING	1	
227(3)	VML1885	LOCK LEVER	1	
228(3)	VXA3147	RACK (B) UNIT	1	
229(3)	VXP0851	MAIN SHAFT UNIT	1	
230(3)	VMB1570	SUB WIPER SPRING (L)	1	
231(3)	VML1878	SUB WIPER ARM	1	
232(3)	VML1879	SUB WIPER ARM (R)	1	
233(3)	VMB1571	SUB WIPER SPRING (R)	1	
234(3)	VMA6900	CASSETTE GUIDE	1	
235(3)	VKF0848	BLINDER PANEL	1	
236(3)	VMB1258	BLINDER SPRING	1	
237(3)	VMB1780	RACK (C) SPRING	1	
238(3)	VMA7237	CONNECTION ROD	1	
239(3)	VMB1779	CONNECTION ROD SPRING	1	
240(3)	VMA7224	CASSETTE HOLDER ANGLE	1	
300(4)	VYP2196	TOP PANEL UNIT	1	
301(4)	VHD0378	TOP PANEL SCREW	4	
302(4)	VMG0272	RF CONVERTER BUSHING	1	
303(4)	VJF0031	WIRE SADDLE	1	
304(4)	VGQ1362	DEMODULATOR HOLDER	2	
305(4)	VGQ1372	C.B. HOLDER	1	
306(4)	VHD0268	MAIN SCREW	1	
307(4)	VKC0330	C.B. CLIP	4	
308(4)	VXA1336	SPACER	3	
309(4)	VKC0247	MAIN HINGE	2	
310(4)	VDG0437	DOOR GEAR	1	
311(4)	VML2075	DOOR OPEN LEVER	1	
312(4)	VMG1756	OPEN LEVER SPRING	1	
313(4)	VGQ1377	TR. HOLDER	1	
314(4)	VMZ0429	FUSE COVER	1	<!>
315(4)	VMZ1140	SW BARRIER (A)	1	<!>
316(4)	VSC2237	POWER SHIELD CASE (BOTTOM)	1	
317(4)	VXA3179	POWER SHIELD CASE(MAIN)	1	
318(4)	VSC2397	POWER SHIELD CASE(TOP)	1	
319(4)	VGH1476	NAME PLATE	1	
320(4)	VMZ1224	INSULATING SHEET	1	
321(4)	VSC2238	IC HEAT SINK	1	
322(4)	VMZ1183	CAPACITOR COVER (A)	2	<!>
323(4)	VMZ1184	CAPACITOR COVER (B)	1	<!>
326(4)	VMP1127	TOP HOLDER ANGLE (R)	1	
327(4)	VMP1037	TOP HOLDER ANGLE (L)	3	
328(4)	VKA0026	RUBBER FOOT	2	
329(4)	VKA0065	BOTTOM LEG	2	
330(4)	VGP1747	SUPPORT PANEL	1	
331(4)	VMC0339	EARTH SPRING (A)	1	
332(4)	VXA3108	SUPPORT PANEL ANGLE (L)	1	
333(4)	VXA3109	SUPPORT PANEL ANGLE (R)	1	
334(4)	VYP2195	FRONT PANEL UNIT	1	
335(4)	VMC0365	BUTTON PLATE SPRING	1	
336(4)	VGU4146	DOOR OPEN BUTTON	1	
337(4)	VGP1881	SUB PANEL	1	
338(4)	VYC0247	DOOR ALUMINUM UNIT	1	
339(4)	VES0440	KEY BOARD PANEL UNIT	1	
340(4)	VMC0340	EARTH SPRING (B)	1	
341(4)	VGP1724	DOOR BACK PANEL	1	
342(4)	VDG0436	DAMPER GEAR	1	
343(4)	VKU0268	BOTTOM PLATE	1	
344(4)	VHD0059	BOTTOM SCREW	8	
345(4)	VGL0331	PANEL LIGHT	1	
346(4)	VMB0904	BUTTON SPRING	7	
347(4)	VGU4145	SYSTEM SELECT BUTTON	7	
400(5)	VQT2539	OPERATING INSTRUCTIONS	1	ENGLISH/ARABIC <!>
400(5)	VQT2540	OPERATING INSTRUCTIONS	1	HINDI/URDU <!>
401(5)	VJA0332	DIN RF CABLE	1	
402(5)	VJSS0070	POWER PLUG ADAPTOR	1	
403(5)	VEQ0701	REMOTE CONTROL UNIT	1	
404(5)	VPN2064	CUSHION (L)	1	
405(5)	VPN2065	CUSHION (R)	1	
406(5)	VPG3844	PACKING CASE	1	
407(5)	VPQ0001	HANDLE	1	
408(5)	VJA0459	AC CORD	1	<!>
409(5)	VEQ0705	DIGITAL SCANNER	1	
410(5)	VQC1168	PROGRAMME SHEET	1	
412(5)	VPK0834	ACCESSORIES PACKING CASE	1	
414(5)	VFC0111	DIGITAL SCANNER CASE	1	
416(5)	VQF2115	CLEANING BRUSH	1	
450(6)	VYK1980	TOP CASE UNIT	1	
451(6)	VKM1133	BOTTOM CASE	1	
452(6)	VKF0971	BATTERY COVER	1	
453(6)	VKW0878	IR WINDOW	1	
454(6)	VSP0323	RUBBER CONTACT	1	
455(6)	VJR0185	ELECTRODE (COMMON)	1	
470(7)	VYK1990	TOP CASE UNIT	1	
471(7)	VGU4099	TRANSMISSON BUTTON	1	
472(7)	VGU4100	POWER SW KNOB	1	
473(7)	VJR0411	ELECTRODE (A)	1	
474(7)	VJR0412	ELECTRODE (B)	1	
475(7)	VJR0272	ELECTRODE (C)	1	
476(7)	VKF1024	BATTERY COVER	1	
478(7)	VKW0940	SMOKE FILTER	1	
479(7)	VSQ0567	SENSOR UNIT	1	
480(7)	VKM1331	BOTTOM CASE	1	
481(7)	VKM1332	SENSOR CAP	1	
		JIG		
	VFM8080HMFPH	VHS-ALIGNMENT TAPE (NTSC)	1	
	VFJ8125H3F	VHS-ALIGNMENT TAPE (PAL)	1	
	VFK0335	RETAINING RING REMOVER (3mm/4mm)	1	
	VFK0387	TENSION POST ADJUSTMENT PLATE	1	
	VFK0191	POST ADJUSTMENT PLATE	1	
	VFK0190	REEL TABLE HEIGHT GAUGE	1	
	VFK0328	H-POSITION ADJ. SCREWDRIVER	1	
	VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
	VFK62	FAN TYPE TENSION GAUGE	1	
	VFK0326	HEX WRENCH SET	1	
	VFK0132	BACK TENSION METER	1	
	VFK0343	CHECK LIGHT	1	
	VFK0344	HEIGHT ADJUSTMENT JIG	1	
	VFK27	HEAD CLEANING STICK	1	
	MOR265	MORLYTONE GREASE	1	
	VFK0283	SERVICE ALIGNMENT TOOL KIT	1	
	VFK0341	UPPER CYLINDER REMOVER	1	

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

2.NV-G500EM Electrical Replacement Parts List

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICROFARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.
5.Printed circuit board assembly with mark(NLA) is no longer available after discontinuation of the product.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03486A	MAIN C.B.A	1	INCLUDING THE INPUT/ OUTPUT C.B.A (VEP03487A),LUMINANCE & CHROMINANCE PACK C.B.A. WITH SECAM PACK C.B.A. (VEP03452C), ARTIFICIAL PAL PACK C.B.A.(VEP03358A). (NLA)
		VEP03487A	INPUT/OUTPUT PACK C.B.A.	1	INCLUDED IN THE MAIN C.B.A.(VEP03486A) (NLA)
		VEP03489A	LUMINANCE & CHROMINANCE PACK C.B.A.	1	INCLUDED IN THE MAIN C.B.A.(VEP03486A) INCLUDING THE SECAM PACK C.B.A. (VEP03452C)(NLA)
		VEP03452C	SECAM PACK C.B.A.	1	INCLUDED IN THE LUMINANCE & CHROMINANCE C.B.A (VEP03489A)(NLA)
		VEP03358A	ARTIFICIAL PAL PACK C.B.A.	1	INCLUDED IN THE MAIN C.B.A.(VEP03486A) (NLA)
		VEP06461A	SERVO & SYSTEM CONTROL C.B.A.	1	INCLUDING THE SUB SERVO C.B.A. C.B.A.(VEP02319A). (NLA)
		VEP02319A	SUB SERVO C.B.A.	1	INCLUDED IN THE SERVO & SYSTEM CONTROL C.B.A.(VEP06461A) (NLA)
		VEP03490A	0.32H SKEW C.B.A.	1	(NLA)
		VEP08124A	SUB CHROMINANCE C.B.A.	1	(NLA)
		VEP05113E	HEAD AMP C.B.A.	1	(NLA)
		VEP06462A	OPERATION C.B.A.	1	(NLA)
		VEP01310A	POWER C.B.A.	1	INCLUDING THE POWER INLET C.B.A. (VEP01311A)(NLA)<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP01311A	POWER INLET C.B.A.	1	INCLUDED IN THE POWER C.B.A(VEP01310A)(NLA) <!>
		VEP07438A	TIMER C.B.A.	1	INCLUDING THE IR RECEIVER C.B.A. (VEP06380E)(NLA)
		VEP06380E	IR RECEIVER C.B.A.	1	INCLUDED IN THE TIMER C.B.A.(VEP07438A) (NLA)
		VEP07459A	TV DEMODULATOR & TUNER C.B.A.	1	INCLUDING THE CH SELECT C.B.A. (VEP07423C)(NLA)
		VEP07423C	CH SELECT C.B.A.	1	INCLUDED IN THE TV DEMODULATOR & TUNER C.B.A. (VEP07459A)(NLA)
		VEP00K62A	CYLINDER DRIVE C.B.A.	1	(NLA)
		VEK3583	MECHANISM CONNECTION C.B.A.	1	(NLA)
		VEK3555	REEL SENSOR C.B.A.	1	(NLA)
		VXA2689	LED C.B.A.	1	(NLA)
		VEK3577	PHOTO TR. (T) C.B.A	1	(NLA)
		VEK3578	PHOTO TR. (S) C.B.A	1	(NLA)
		VEP66038A	REMOTE CONTROLLER C.B.A.	1	(NLA)
		VEP66039B	DIGITAL SCANNER C.B.A.	1	(NLA)
		ENV59804F2	TUNER	1	
		ENC87794	RF CONVERTER	1	
	■	VEP03486A	MAIN C.B.A		INCLUDING THE INPUT/ OUTPUT C.B.A (VEP03487A),LUMINANCE & CHROMINANCE PACK C.B.A. WITH SECAM PACK C.B.A. (VEP03452C), ARTIFICIAL PAL PACK C.B.A.(VEP03358A). (NLA)
BP1101		VJP1396	CONNECTOR (MALE)	1	
BP3001		VJP1808	CONNECTOR (MALE)	1	

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
BP3002		VJP1257	CONNECTOR (MALE)	1	
BP3003		VJP1260	CONNECTOR (MALE)	1	
BP8001		VJP1260	CONNECTOR (MALE)	1	
BP8002		VJP1263	CONNECTOR (MALE)	1	
BP8003		VJP1805	CONNECTOR (MALE)	1	
			CAPACITORS		
C301		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C302		ECUM1H820JCN	CHIP 50V 82P	1	
C303		ECUM1H470JCN	CHIP 50V 47P	1	
C304		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C305		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C306		ECUM1H220JCN	CHIP 50V 22P	1	
C307		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C308		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C309		ECUM1H220JCN	CHIP 50V 22P	1	
C310		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311		ECUM1H560JCN	CHIP 50V 56P	1	
C312,13		ECUM1H180JCN	CHIP 50V 18P	2	
C314		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C315		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C316		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C317		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C318		ECEA1EKN2R2	E.CAPACITOR 25V 2.2U	1	
C319		ECEA1EKA220	E.CAPACITOR 25V 22U	1	
C320		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C321		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C322		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C323		ECUM1H470JCN	CHIP 50V 47P	1	
C324		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C325		ECUM1H560JCN	CHIP 50V 56P	1	
C326		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C327		ECUM1H820JCN	CHIP 50V 82P	1	
C328		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C329		ECUM1H680JCN	CHIP 50V 68P	1	
C330		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C331		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C332		ECUM1H270JCN	CHIP 50V 27P	1	
C333		ECUM1H101JCN	CHIP 50V 100P	1	
C334		ECUM1H680JCN	CHIP 50V 68P	1	
C335		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C336		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C337		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C338-40		ECUM1H103ZFN	CHIP 50V 0.01U	3	
C341,42		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C343,44		ECUM1H103ZFN	CHIP 50V 0.01U	2	
C345		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C801		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C802		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C803		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C804		ECEA25Z4R7	E.CAPACITOR 25V 4.7U	1	
C805		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C806		ECEA0JU221	ELECTROLYTIC 6.3V 220U	1	
C807		ECUM1H050CCN	CHIP 50V 5P	1	
C808		ECUM1H102KBN	CHIP 50V 1000P	1	
C809		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C811		ECUM1H471KBN	CHIP 50V 470P	1	
C812		ECUM1H270JCN	CHIP 50V 27P	1	
C813		ECUM1H101JCN	CHIP 50V 100P	1	
C814		ECUM1H820JCN	CHIP 50V 82P	1	
C815		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C816		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C817		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C818		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C819		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C820,21		ECUM1H103ZFN	CHIP 50V 0.01U	2	
C822		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C823		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C824		ECUM1H471KBN	CHIP 50V 470P	1	
C851		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C852		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C853		ECEA10Z47	E.CAPACITOR 10V 47U	1	
C854		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C855		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C856		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C2001-03		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2004-06		ECQB1H333JH	P.CAPACITOR 50V 0.033U	3	
C2007-09		ECKF1H332KB	C.CAPACITOR 50V 3300P	3	
C2010,11		ECQB1H223JH	P.CAPACITOR 50V 0.022U	2	
C2012		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2014		ECEA25Z47	E.CAPACITOR 25V 47U	1	
C2015		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C2016		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2017		ECKF1H821KB	C.CAPACITOR 50V 820P	1	
C3014,15		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3016		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3017		ECKF1H392KB	C.CAPACITOR 50V 3900P	1	
C3018		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C3019		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C3020		ECCF1H181JC	C.CAPACITOR 50V 180P	1	
C3021		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C3022		ECCF1H151JC	C.CAPACITOR 50V 150P	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3024		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C3025		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3026		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C3027		ECKF1H181KB	C.CAPACITOR 50V 1800P	1	
C3028		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3029		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3030		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3031		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3032		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C3033		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C3034,35		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3501,02		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C3503,04		VCYD1E332KR	S.CAPACITOR 25V 3300P	2	
C3505		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3506		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3507		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3508		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4001		ECQP1332JZ	M.CAPACITOR 100V 3300P	1	
C4002		ECCD2H121K	C.CAPACITOR 500V 120P	1	
C4003		ECEA16Z33	E.CAPACITOR 16V 33U	1	
C4004		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C4005		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4006		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4007		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4008		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4009		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4010		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4011		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4012		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4013		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4014		ECCF1H121JC	C.CAPACITOR 50V 120P	1	
C4015		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
C4016		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C4017		ECEA1CKL100	E.CAPACITOR 16V 10U	1	
C4018		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4019		ECEA16Z47	E.CAPACITOR 16V 47U	1	
C4020		ECQB1H122JH	P.CAPACITOR 50V 1200P	1	
C4021		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4022,23		ECKF1H102KB	C.CAPACITOR 50V 1000P	2	
C4024		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C4025		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C4026		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C4027		ECCF1H221JC	C.CAPACITOR 50V 220P	1	
C4028		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C4029		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C4033		ECQB1H222JH	P.CAPACITOR 50V 2200P	1	
C6007		ECKF1H562KB	C.CAPACITOR 50V 5600P	1	
C6008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6013		ECKF1H103KB	C.CAPACITOR 50V 0.01U	1	
C6014		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C6015		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C6016		ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C6017		EECS5R5V105	TRIMMER	1	
C6020		ECEA1CK100	E.CAPACITOR 16V 10U	1	

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6021		ECEA1HU101B	E.CAPACITOR 50V 100U	1	
C6022		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6031		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6035		ECEA1AF221	E.CAPACITOR 10V 220U	1	
C6036		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C8001		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8002		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8003-05		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C8006-08		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	3	
C8009		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8010		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8701,02		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C8703		ECCF1H221JC	C.CAPACITOR 50V 220P	1	
C8704		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8705		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C8706		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C8707-09		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C8710		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C8711,12		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C8713		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C8714		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8715		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
D301		MA4091	DIODE	1	
D801		1SS254T	DIODE	1	
D2001		1SS254T	DIODE	1	
D3001		1SS254T	DIODE	1	
D3501-10		1SS254T	DIODE	10	
D3511		MA27W	DIODE	1	
D4001		1SS254T	DIODE	1	
D4002		AK04V2	DIODE	1	
D4003-05		1SS254T	DIODE	3	
D6001,02		1SS254T	DIODE	2	
D6004-06		1SS254T	DIODE	3	
D6008-11		1SS254T	DIODE	4	
D6013-16		1SS254T	DIODE	4	
D6018		1SS254T	DIODE	1	
D6019		MA4140M	DIODE	1	
D6020		MA4110M	DIODE	1	
D6021-30		1SS254T	DIODE	10	
D6031		ERA15-01	DIODE	1	
D6032		1SS254T	DIODE	1	
D6033		AK04V2	DIODE	1	
D6034-37		1SS254T	DIODE	4	
D6038		MA4056L	DIODE	1	
D6039,40		1SS254T	DIODE	2	
D6050,51		1SS254T	DIODE	2	
DL801		EFDVR645A45A	DELAY LINE	1	
DL802		EFDHR124A13S	DELAY	1	
FL301		VLF0499	FILTER	1	
FL302		ELB4M022	FILTER	1	
FL303		VLF0567	FILTER	1	
FL801		EFCS5R06MS4V	CERAMIC FILTER 5.06MHZ	1	
FL802		VLF0299	FILTER	1	
FL851		EFCS4R5MS4C	FILTER	1	
FL3501		ELB4H020	FILTER	1	
IC301		VEFH03D	HIC	1	
IC302		MSM6965-3RS	IC	1	
IC801		VEFH04A	HIC	1	
IC851		BA7025L	IC	1	
IC2001		BA6432S	IC	1	
IC3002		AN3396	IC	1	
IC3501		BA7004	IC	1	
IC4001		BA7766AS	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC6001		BU3761S	IC	1	
IC6003		MC74HC08N	IC	1	
IC8701		UPD4053BC	IC	1	
IC8702		UPD4013BC	IC	1	
JP7001		VJS2151W	CONNECTOR (FEMALE)	1	
JP7002		VJS2152W	CONNECTOR (FEMALE)	1	
JP7401		VJS2159W	CONNECTOR (FEMALE)	1	
L301		VLQEL05F121K	COIL 120UH	1	
L302		VLQEL05F680K	COIL 68UH	1	
L303,04		VLQEL05F101K	COIL 100UH	2	
L305		VLQEL05F220K	COIL 22UH	1	
L306		VLQEL05F2R2K	COIL 2.2UH	1	
L307		VLQEL05F220K	COIL 22UH	1	
L308-10		VLQEL05F101K	COIL 100UH	3	
L801		VLQEL05F101K	COIL 100UH	1	
L802		VLQEL05F470K	COIL 47UH	1	
L803		VLQEL05F151K	COIL 150UH	1	
L804		VLQEL05F270K	COIL 27UH	1	
L805		VLQEL05F331K	COIL 330UH	1	
L806		VLQEL05F681K	COIL 680UH	1	
L807		VLQEL05F470K	COIL 47UH	1	
L808		VLQEL05F101K	COIL 100UH	1	
L810,11		VLQEL05F150K	COIL 15UH	2	
L812		VLQEL05F681K	COIL 680UH	1	
L813		VLQEL05F150K	COIL 15UH	1	
L851		VLQEL05F101K	COIL 100UH	1	
L2001		VLQEL05F102K	COIL 1000UH	1	
L3005		VLQEL05F101K	COIL 100UH	1	
L3006		VLQEL05F4R7K	COIL 4.7UH	1	
L3007		VLQEL05F6R8K	COIL 6.8UH	1	
L3008		VLQEL05F120K	COIL 12UH	1	
L3009,10		VLQEL05F101K	COIL 100UH	2	
L3011		VLQEL05F3R3K	COIL 3.3UH	1	
L3501-03		VLQEL05F101K	COIL 100UH	3	
L4001		VLQEL05F471K	COIL 470UH	1	
L4002		VLQ0317	COIL 8200UH	1	
L6003,4		VLQEL05F100K	COIL 10UH	2	
L8001,02		VLQEL05F101K	COIL 100UH	2	
L8701		VLQEL05F101K	COIL 100UH	1	
P501		VJS1741T	CONNECTOR (FEMALE)	1	
P502		VJS1237T	CONNECTOR	1	
P1001		VJF0171T	CONNECTOR	1	
P1102		VJP1148	CONNECTOR(MALE)	1	
P1102		VJS1141	CONNECTOR (FEMALE)	1	
P2001		VJP1932T	CONNECTOR (MALE)	1	
P3501		VJS1236T	CONNECTOR (FEMALE)	1	
P4001		VJP1233T	CONNECTOR(MALE) 6P	1	
P4002		VJP1229T	CONNECTOR(MALE) 2P	1	
P7402		VJP1262	CONNECTOR (MALE)	1	
P7506		VJS1238T	CONNECTOR	1	
P8501		VJS1236T	CONNECTOR (FEMALE)	1	
P8502		VJS1239T	CONNECTOR (FEMALE)	1	
P8503		VJS1738T	CONNECTOR (FEMALE)	1	
PP3001		VJP1862	CONNECTOR (MALE)	1	
PP3002		VJP1861	CONNECTOR (MALE)	1	
PS3501		VJS1862	CONNECTOR (FEMALE)	1	
PS3502		VJS1861	CONNECTOR (FEMALE)	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q301		2SC1009A	TRANSISTOR	1	
Q302		2SA812	TRANSISTOR	1	
Q303		2SC1009A	TRANSISTOR	1	
Q304		2SC1009A	TRANSISTOR	1	
Q802		2SA812	TRANSISTOR	1	
Q803		2SC1623	TRANSISTOR	1	
Q804		2SC1623	TRANSISTOR	1	
Q3010,11		2SD636	TRANSISTOR	2	
Q3012,13		2SC2206	TRANSISTOR	2	
Q3014		2SD636	TRANSISTOR	1	
Q3501		2SD636	TRANSISTOR	1	
Q3502		2SB641	TRANSISTOR	1	
Q4001		2SD638	TRANSISTOR	1	(R)
Q6003		2SD1275	TRANSISTOR	1	
Q6004		2SD636	TRANSISTOR	1	
Q6008		2SB641	TRANSISTOR	1	
Q8001-06		2SD636	TRANSISTOR	6	
Q8701		2SD636	TRANSISTOR	1	
Q8702		2SC2206	TRANSISTOR	1	
Q8703		2SD636	TRANSISTOR	1	
Q8704		2SC2206	TRANSISTOR	1	
Q8705-07		2SD636	TRANSISTOR	3	
QR301		DTC124EK	TRANSISTOR-RESISTOR	1	
QR302		DTC114YA	TRANSISTOR-RESISTOR	1	
QR303		DTC114YK	TRANSISTOR-RESISTOR	1	
QR304		DTC124EK	TRANSISTOR-RESISTOR	1	
QR305		DTC144EK	TRANSISTOR-RESISTOR	1	
QR306		DTC124EK	TRANSISTOR-RESISTOR	1	
QR801		DTC124EK	TRANSISTOR-RESISTOR	1	
QR802		DTC144EK	TRANSISTOR-RESISTOR	1	
QR803		DTC114YK	TRANSISTOR-RESISTOR	1	
QR3001		DTC124EA	TRANSISTOR RESISTOR	1	
QR3002,03		2SD1676	COMBINATION PARTS	2	
QR3004		DTC114EA	TRANSISTOR RESISTOR	1	
QR3005		DTC124EA	TRANSISTOR RESISTOR	1	
QR3501-03		DTC114YA	TRANSISTOR RESISTOR	3	
QR3504		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR4001,02		2SD1676	COMBINATION PARTS	2	
QR6001		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR6002		DTA114EA	TRANSISTOR RESISTOR	1	
QR6003		DTC124EA	TRANSISTOR RESISTOR	1	
QR6004		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR6005		DTA144EA	TRANSISTOR RESISTOR	1	
QR6006		DTC124EA	TRANSISTOR RESISTOR	1	
QR6008		DTA124EA	TRANSISTOR RESISTOR	1	
QR6011		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR6012		DTC124EA	TRANSISTOR RESISTOR	1	
QR6013		DTA114YA	TRANSISTOR-RESISTOR	1	
QR6014		DTA114EA	TRANSISTOR RESISTOR	1	
QR6015		DTA144EA	TRANSISTOR RESISTOR	1	
QR6016,17		DTA114EA	TRANSISTOR RESISTOR	2	
QR6018		DTC114YA	TRANSISTOR RESISTOR	1	
QR6019		DTC114EA	TRANSISTOR RESISTOR	1	
QR6020		DTA144EA	TRANSISTOR RESISTOR	1	
QR6022		DTC144WA	TRANSISTOR RESISTOR	1	
QR6023		DTA144EA	TRANSISTOR RESISTOR	1	
QR6024		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
			RESISTORS		
R301		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R302		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R303		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R304		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R305		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R306		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R307		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R308		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R309		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R310		ERJ6GMYJ123	CHIP 1/16W 12K	1	
R311		ERJ6GMYJ474	M.RESISTOR CH1/16W 470K	1	
R312		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R314		ERJ6GMYJ101	CHIP 1/16W 100	1	
R315		ERJ6GMYJ391	CHIP 1/16W 390	1	
R316		ERJ6GMYJ331	CHIP 1/16W 330	1	
R317		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R318		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R319		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R320		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R321		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R322		ERJ6GMYJ681	CHIP 1/16W 680	1	
R323		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R324		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R325		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R326		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R327		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R328		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R329		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R330		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R331		ERJ6GMYJ151	CHIP 1/16W 150	1	
R332		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R333		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R334		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R801		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R802		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R803		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R804		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R805		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R807		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R808		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R809		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R810		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R811		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R812		ERJ6GMYJ471	CHIP 1/16W 470	1	
R813		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R814		ERJ6GMYJ221	CHIP 1/16W 220	1	
R815		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R816		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R817		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R818		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R819		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R820		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R821,22		ERJ6GMYJ271	CHIP 1/16W 270	2	
R823		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R824		ERJ6GMYJ681	CHIP 1/16W 680	1	
R851		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R852		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R853		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R854		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R855		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R856		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2001-04		ERDS2TJ560	C.RESISTOR 1/4W 56	4	
R2005		ERX12SJ1R0	M.RESISTOR 1/2W 1	1	
R2006		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2007		EROS2CKG1201	M.RESISTOR 1/4W 1.2K	1	
R2008		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R2009		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R2010		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R3021		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3024		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3025		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R3026		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R3027		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3028		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3029,30		ERDS2TJ821	C.RESISTOR 1/4W 820	2	
R3031		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3032		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3033		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3034		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3037		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3041		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3501		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R3502		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3503		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R3504,05		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
R3506		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3507		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3508		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3509		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3510		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3511,12		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3513		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3514		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3515		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3518		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4001		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R4002,03		ERDS2TJ183	C.RESISTOR 1/4W 18K	2	
R4004		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R4005		ERDS2TJ220	C.RESISTOR 1/4W 22	1	
R4006		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R4007		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4008		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R4009		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4011		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4012		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R4013		ERDS2TJ334	C.RESISTOR 1/4W 330K	1	
R4014,15		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	2	
R4016		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R4017		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R4019		ERDS2TJ363	C.RESISTOR 1/4W 36K	1	
R4020		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4021		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R4022		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4023		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4024,25		EROS2CKG1003	M.RESISTOR 1/4W 100K	2	
R4026		EROS2CKG4702	M.RESISTOR 1/4W 47K	1	
R4027		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4028		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4029		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R4031		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R4032		EROS2CKG6201	M.RESISTOR 1/4W 6.2K	1	
R4036		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R4037		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6001		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6002		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6003		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R6004		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R6008		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6009		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R6011		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6012,13		ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R6014		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R6015		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6021		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6023		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R6024		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6025		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6026		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6027		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6028		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6029		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R6030		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R6031,32		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R6033		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6034		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6037		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R8001		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8002		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8003		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8004		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8005		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R8006		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8007		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R8008		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8009		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8010		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8011		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8012		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R8013		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8014		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8701,02		ERDS2TJ333	C.RESISTOR 1/4W 33K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8703		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8704		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R8705		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R8706		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R8707,08		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R8709-11		ERDS2TJ391	C.RESISTOR 1/4W 390	3	
R8712,13		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R8714		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R8715		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R8716		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R8717		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R8718		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8719		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8720		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R8721		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R8722		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8723		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R8724		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
SW3501		VSS0234	SWITCH	1	
SW3502		VSS0225	SWITCH	1	
T851		ELM7Q207A	COIL	1	
T4001		EIQ7QF014Q	TRANSFORMER	1	
VR301		EVN3ACA00B14	V.RESISTOR 10K	1	
VR2006		EVND4AA00B25	V.RESISTOR 200K	1	
VR2011		EVND4AA00B25	V.RESISTOR 200K	1	
VR2013		EVND4AA00B13	V.RESISTOR 1K	1	
VR2020-22		EVND4AA00B25	V.RESISTOR 200K	3	
VR3003		EVND4AA00B53	V.RESISTOR 5K	1	
VR3012,13		EVND4AA00B52	V.RESISTOR 500	2	
VR3501-03		EVN58AA00B25	V.RESISTOR 200K	3	
VR4002		EVND4AA00B25	V.RESISTOR 200K	1	
VR8001		EVND4AA00B13	V.RESISTOR 1K	1	
VR8003,04		EVND4AA00B13	V.RESISTOR 1K	2	
VR8005		EVN38CA00B25	V.RESISTOR 200K	1	
VR8008		EVND4AA00B53	V.RESISTOR 5K	1	
VR8010		EVND4AA00B13	V.RESISTOR 1K	1	
VR2001N		EVND4AA00B54	V.RESISTOR 50K	1	
VR2001P		EVND4AA00B54	V.RESISTOR 50K	1	
X301		VSX0225	CRYSTAL OSCILLATOR	1	
X801		VSX0162A	CRYSTAL OSCILLATOR	1	
X3501		VSX0099	CRYSTAL OSCILLATOR	1	
X6001		VSQ0565	BUZZER	1	
			MISCELLENEOUS		
		VMC0075	HEAT SINK FIX SPRING	1	
		VSC1689	IC HEAT SINK	1	
		VSC1068	HEAT SINK	1	
		VKC0329	HINGE CLIP	2	
		VEK3472	ANT TERMINAL UNIT	1	
		VMZ1261	BARRIER	1	
		VEJ0648	S/o JACK PLATE		
	■	VEP06461A	SERVO & SYSTEM CONTROL		INCLUDING THE SUB
			C.B.A.		SERVO C.B.A.
					C.B.A.(VEP02319A).
					(NLA)

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
BP4002		VJP1253	CONNECTOR (MALE)	1	
			CAPACITORS		
C249		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C250		ECCF1H181JC	C.CAPACITOR 50V 180P	1	
C251		ECCF1H150JC	C.CAPACITOR 50V 15P	1	
C252		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C253		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6502		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6503		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6504		ECUM1H562KBN	CHIP 50V 5600P	1	
C6505		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C6507		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6509		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C6510		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C6512		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6513		VCYD1C103MR1	S.CAPACITOR 16V 0.01U	1	
C6514		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C6515		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C6516		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C6517		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6518		ECUM1H472KBN	CHIP 50V 4700P	1	
C6519		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6521		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C6522		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6523		ECUM1H562KBN	CHIP 50V 5600P	1	
C6524		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C6525		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C6526		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C6527		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C6528		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C6529		ECEA16Z10	E.CAPACITOR 16V 10U	1	
C6530		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C6531		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6532		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C6534		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C6537		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6538		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6539		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C6540		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6541		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C6544		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6545		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C6546		ECEA25Z6R8	E.CAPACITOR 25V 6.8U	1	
C6547,48		ECKF1H271JC	C.CAPACITOR 50V 270P	2	
C6549		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6550		ECUM1H332KBN	CHIP 50V 3300P	1	
C6551		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6552		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
D6501,02		1SS254T	DIODE	2	
D6505-10		1SS254T	DIODE	6	
D6511		ERA15-01	DIODE	1	
D6512-20		1SS254T	DIODE	9	
IC6501		AN6562	IC	1	
IC6502		AN6914	IC	1	
IC6503		MN6740VCZK	IC	1	
IC6504		MN1280T	IC	1	
IC6505		AN6914	IC	1	
JP6501		VJS2154W	CONNECTOR (FEMALE)	1	
JP6502		VJS2156W	CONNECTOR (FEMALE)	1	
JP6503,04		VJS2157W	CONNECTOR (FEMALE)	2	
JP6506		VJS2149W	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
JP6508		VJS2157W	CONNECTOR (FEMALE)	1	
L202		VLQEL05F101K	COIL 100UH	1	
L6501		VLQEL07F222J	COIL 2200UH	1	
P6507		VJP1232T	CONNECTOR(MALE) 5P	1	
Q207		2SC2206	TRANSISTOR	1	
Q6501,02		2SC2021M	TRANSISTOR	2	
Q6506		2SD893	TRANSISTOR	1	
Q6507		2SD973	TRANSISTOR	1	
Q6508		2SC1652M	TRANSISTOR	1	
Q6509		2SB909M	TRANSISTOR	1	
Q6510		2SB909M	TRANSISTOR	1	(Q,R)
Q6511,12		2SA937M	TRANSISTOR	2	
QR6501		2SD1676	COMBINATION PARTS	1	
QR6503		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR6507		DTA114EA	TRANSISTOR RESISTOR	1	
QR6508		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
QR6509		DTA144EA	TRANSISTOR RESISTOR	1	
QR6510		DTA114EA	TRANSISTOR RESISTOR	1	
QR6511,12		DTC144EA	TRANSISTOR RESISTOR	2	OR UN1213
			RESISTORS		
R262		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R263		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R264		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R265		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6501		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6502		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R6503		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6504		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R6505		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R6506		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6507		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6508		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6509		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6510,11		ERJ6GMYJ103	CHIP 1/16W 10K	2	
R6512,13		ERJ6GMYJ473	CHIP 1/16W 47K	2	
R6514		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6515		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6516		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6519		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6522		ERJ6GMYG682	CHIP 1/16W 6.8K	1	
R6523		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R6524		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6525,26		ERJ6GMYJ223	CHIP 1/16W 22K	2	
R6527		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6528		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6529		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6530		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R6531		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R6532		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6533		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R6534		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6535		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6536,37		ERJ6GMYJ223	CHIP 1/16W 22K	2	
R6538		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R6539		ERJ6GMYJ821	CHIP 1/16W 820	1	
R6540		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6547		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R6548		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6549		ERJ6GMYJ123	CHIP 1/16W 12K	1	
R6550-52		ERJ6GMYJ101	CHIP 1/16W 100	3	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6553		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6554		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R6555		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R6556		ERJ6GMYJ561	CHIP 1/16W 560	1	
R6557,58		ERJ6GMYJ153	CHIP 1/16W 15K	2	
R6559		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R6560,61		ERJ6GMYJ333	CHIP 1/16W 33K	2	
R6562		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6563		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R6564		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6565		ERJ6GMYJ271	CHIP 1/16W 270	1	
R6566		ERJ6GMYJ121W	M.RESISTOR CH1/16W 120	1	
R6567		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6568		ERG2SJ180	M.RESISTOR 2W 18	1	
R6569		ERJ6GMYJ391	CHIP 1/16W 390	1	
R6570		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6571		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6572,73		ERJ6GMYJ471	CHIP 1/16W 470	2	
R6574		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R6575		ERJ6GMYJ271	CHIP 1/16W 270	1	
R6576		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6577		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6578		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R6579		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6580		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6581		ERD2FCG220	C.RESISTOR 2W 22	1	
R6582		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6583		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6584		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6585		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R6586,87		ERJ6GMYJ222	CHIP 1/16W 2.2K	2	
R6588		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6589		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R6590		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R6591,92		ERJ6GMYJ561	CHIP 1/16W 560	2	
R6593		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6594		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R6595		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6596		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6597		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6598,99		ERDS2TJ221	C.RESISTOR 1/4W 220	2	
X201		VSX0244	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0632	WIRE SADDLE	1	
	■	VEP03490A	0.32H SKEW C.B.A.		(NLA)
			CAPACITORS		
C3801		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3802		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3803		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C3804		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3805		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C3806		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C3807		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
C3808		ECCF1H680JC	C.CAPACITOR 50V 68P	1	
C3809		ECCF1H080CC	C.CAPACITOR 50V 8P	1	
C3810		ECCF1H180JC	C.CAPACITOR 50V 18P	1	
C3811		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3812,13		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C3814		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3815,16		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C3817		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3818		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3819		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3820		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3821		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3822,23		ECCF1H820JC	C.CAPACITOR 50V 82P	2	
C3824-26		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C3827		ECCF1H100DC	C.CAPACITOR 50V 10P	1	
C3828		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C3829		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3830		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3901		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3902		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3903		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C3904		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3905		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C3906		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C3907		ECKF1H221KB	C.CAPACITOR 50V 220P	1	
C3908		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C3909		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3910		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3911		ECQB1H152JH	P.CAPACITOR 50V 1500P	1	
C3912		ECQP1H392JZ	P.CAPACITOR 50V 3900P	1	
C3913		ECKF1H221KB	C.CAPACITOR 50V 220P	1	
C3914		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
D3801		RD10EB1	DIODE	1	
D3802-04		1SS254T	DIODE	3	
IC3801		BA7021	IC	1	
IC3802		TL8705P	IC	1	
IC3901		AN5753	IC	1	
L3801		VLQEL05F101K	COIL 100UH	1	
L3802		VLQEL05F560K	COIL 56UH	1	
L3803		VLQEL05F470K	COIL 47UH	1	
L3804		VLQEL05F150K	COIL 15UH	1	
L3805		VLQEL05F270K	COIL 27UH	1	
L3806,07		VLQEL05F101K	COIL 100UH	2	
L3808,09		VLQEL05F330K	COIL 33UH	2	
L3810		VLQEL05F101K	COIL 100UH	1	
L3811		VLQEL05F680J	COIL 68UH	1	
L3812		VLQEL05F100J	COIL 10UH	1	
L3901		VLQEL05F101K	COIL 100UH	1	
P3801		VJP1236T	CONNECTOR(MALE) 9P	1	
P3901		VJP1230T	CONNECTOR(MALE) 3P	1	
Q3801		2SD636	TRANSISTOR	1	
Q3802		2SB643	TRANSISTOR	1	
Q3803		2SC2206	TRANSISTOR	1	
Q3804		2SB641	TRANSISTOR	1	
Q3805		2SC2206	TRANSISTOR	1	
Q3902		2SC2206	TRANSISTOR	1	
Q3903		2SD1206	TRANSISTOR	1	
Q3904		2SD1991	TRANSISTOR	1	
QR3801-03		DTC124EA	TRANSISTOR RESISTOR	3	
QR3902		DTC114YA	TRANSISTOR RESISTOR	1	
QR3903		DTC144EA	TRANSISTOR RESISTOR	1	
			RESISTORS		

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3802		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R3803		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R3804		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R3805		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3806		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3807		ERTD2ZHL333S	THERMISTOR 33K	1	
R3808		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3809		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3810		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3811		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3812		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R3813		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3814		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3815		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3816		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3817		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R3818		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3819		ERD2FCG390	C.RESISTOR 1/4W 39	1	
R3820,21		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R3901		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3902		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R3903		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3904		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3905		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R3906		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3907		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3908		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3909		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3910		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3911		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3912		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R3913		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3914		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3915		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3916		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R3917		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
VR3801,02		EVND1AA00B13	V.RESISTOR 1K	2	
VR3901		EVN32CA00B52	V.RESISTOR 500	1	
X3801		VSX0173	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMZ1261	BARRIER	1	
	■	VEP08124A	SUB CHROMINANCE C.B.A.		(NLA)
			CAPACITORS		
C8501		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C8502		ECCF1H080DC	C.CAPACITOR 50V 8P	1	
C8503		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C8504		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8505		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C8506		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C8507		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8508		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8509		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C8510		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C8511		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C8512		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C8513,14		ECKF1H271KB	C.CAPACITOR 50V 270P	2	
C8515		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8516		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C8517		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8518		ECEA0JS221	E.CAPACITOR 6.3V 220U	1	
C8519		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8520,21		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C8522		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8523		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8524		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C8525		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8526		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8527		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
C8528		ECCF1H271JC	C.CAPACITOR 50V 270P	1	
C8529		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8530		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C8531		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8532		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C8533		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8534		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C8535		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C8536		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8537		ECEA10247	E.CAPACITOR 10V 47U	1	
C8538		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C8539		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C8540,41		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C8542		ECKF1H561KB	C.CAPACITOR 50V 560P	1	
C8543-46		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	4	
C8547		ECCF1H151JC	C.CAPACITOR 50V 150P	1	
C8548		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8549		ECCF1H221JC	C.CAPACITOR 50V 220P	1	
C8550,51		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
D8501,02		1SS254T	DIODE	2	
DL8501		VLD0071	DELAY LINE	1	
FL8501		VLF0295	FILTER	1	
FL8502		VLF0330	FILTER	1	
FL8503		VLF0645	FILTER	1	
FL8504		VLF0647	FILTER	1	
FL8505		VLF0643	FILTER	1	
FL8506		VLF0644	FILTER	1	
FL8507		VLF0646	FILTER	1	
FL8508		VLF0648	FILTER	1	
FL8509		VLF0143	FILTER	1	
FL8510		VLF0649	FILTER	1	
IC8501		BA7107S	IC	1	
IC8502		BA7025L	IC	1	
IC8503		VEFH04B	IC	1	
L8501		VLQEL05F470K	COIL 47UH	1	
L8502		VLQEL05F101K	COIL 100UH	1	
L8504		VLQEL05F331K	COIL 330UH	1	
L8505		VLQEL05F221K	COIL 220UH	1	
L8506		VLQEL05F180K	COIL 18UH	1	
L8507-12		VLQEL05F101K	COIL 100UH	6	
L8513		VLQEL05F221K	COIL 220UH	1	
L8514		VLQEL05F120K	COIL 12UH	1	
L8515		VLQEL05F221K	COIL 220UH	1	
P8501		VJP1236T	CONNECTOR(MALE) 9P	1	
P8502		VJP1239T	CONNECTOR(MALE) 12P	1	
P8503		VJP1232T	CONNECTOR(MALE) 5P	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q8501,02		2SD636	TRANSISTOR	2	
Q8503,04		2SB641	TRANSISTOR	2	
Q8505-07		2SC2206	TRANSISTOR	3	
Q8508		2SB641	TRANSISTOR	1	
Q8509,10		2SC2206	TRANSISTOR	2	
Q8511		2SB641	TRANSISTOR	1	
QR8501		DTC144EA	TRANSISTOR RESISTOR	1	OR UN1213
			RESISTORS		
R8501		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R8502		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R8503		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8504		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R8505		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R8506		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8507		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R8508		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8509		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R8510		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8511		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R8512		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8513		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R8514		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8515		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R8516		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R8517		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R8518		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8519		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R8520		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R8521		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R8522,23		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R8524		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
R8525		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R8526		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R8527		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R8528		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R8529		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8530		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R8531		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8532		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R8533		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R8534		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8535		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R8536		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R8537		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R8538		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R8539		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8540		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8541		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8542		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R8543		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R8544		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R8545		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R8546		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8547		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R8548-51		ERDS2TJ102	C.RESISTOR 1/4W 1K	4	
R8552		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R8553		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R8554		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R8555,56		ERDS2TJ123	C.RESISTOR 1/4W 12K	2	
R8557		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8558,59		ERDS2TJ123	C.RESISTOR 1/4W 12K	2	
R8560		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8561		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R8562,63		ERDS2TJ471	C.RESISTOR 1/4W 470	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
T8501		ELM7Q207A	COIL	1	
X8501		VSX0160	CRYSTAL OSCILLATOR	1	
	■	VEP05113E	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C501		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C502		ECUX1H820JCN	CHIP 50V 82P	1	
C503		ECUX1H101JCN	CHIP 50V 100P	1	
C504		ECUX1H270JCN	CHIP 50V 27P	1	
C505		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C506		ECUX1E473ZFN	CHIP 25V 0.047U	1	
C507		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C509		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C510,11		ECUX1E104ZFN	CHIP 25V 0.1U	2	
C512		ECUX1H820JCN	CHIP 50V 82P	1	
C513		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C514		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C515		ECUX1H102KBN	CHIP 50V 1000P	1	
C516		ECUX1H150JCN	CHIP 50V 15P	1	
C517		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C518,19		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C520		ECUX1H150JCN	CHIP 50V 15P	1	
C521,22		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C523		ECUX1H150JCN	CHIP 50V 15P	1	
C524		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C526		ECUX1E104ZFN	CHIP 25V 0.1U	1	
C527		ECUX1H102KBN	CHIP 50V 1000P	1	
C528,29		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C530		ECUX1E473ZFN	CHIP 25V 0.047U	1	
C531		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C533		ECUX1H560JCN	CHIP 50V 56P	1	
C534		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C536		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C537		ECUX1H150JCN	CHIP 50V 15P	1	
C538		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C539		ECUX1H103ZFN	CHIP 50V 0.01U	1	
IC501		AN3224K	IC	1	
IC502		AN3311S	IC	1	
L501		VLQEL05F101K	COIL 100UH	1	
L502		VLQEL05F820K	COIL 82UH	1	
L503		VLQEL05F151K	COIL 150UH	1	
L505		VLQEL05F101K	COIL 100UH	1	
L507		VLQEL05F270K	COIL 27UH	1	
P002		VJS1927	CONNECTOR (FEMALE)	1	
P501		VJP1248T	CONNECTOR(MALE) 8P	1	
P502		VJP1237T	CONNECTOR(MALE) 10P	1	
Q501		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q502		2SC2404	TRANSISTOR CHIP	1	(C,D)
			RESISTORS		

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R501		ERJ6GMYJ561	CHIP 1/16W 560	1	
R502		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R503		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R504		ERJ6GMYJ331	CHIP 1/16W 330	1	
R506		ERJ6GMYJ471	CHIP 1/16W 470	1	
R507		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R508,09		ERJ6GMYJ100	CHIP 1/16W 10	2	
R510		ERJ6GMYJ561	CHIP 1/16W 560	1	
R511,12		ERJ6GMYJ821	CHIP 1/16W 820	2	
R515		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R516		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R517		ERJ6GMYJ391	CHIP 1/16W 390	1	
R519,20		ERJ6GMYJ100	CHIP 1/16W 10	2	
R522		ERJ6GMYJ561	CHIP 1/16W 560	1	
R524		ERJ6GMYJ334	CHIP 1/16W 330K	1	
R526		ERJ6GMYJ223	CHIP 1/16W 22K	1	
VR501		EVND1AA00B23	V.RESISTOR 2K	1	
			MISCELLANEOUS		
		VSC1834	H.AMP SHIELD CASE (BOTTOM)	1	
		VSC2204	H.AMP SHIELD CASE (TOP)	1	
		VSC2205	H.AMP SHIELD CASE (MAIN)	1	
	■	VEP06462A	OPERATION C.B.A.		(NLA)
D6801		LN38GCPPSVT	LED	1	
D6802		LN28RCPP	LED	1	
D6803,04		1SS254T	DIODE	2	
P6801		VJF0171T	CONNECTOR	1	
P6801		VJP1394T	CONNECTOR(MALE)	1	
P7505		VJF0171T	CONNECTOR	1	
			RESISTORS		
R6801		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R6802		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R6803		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
SW6801-04		EVQQS307K	SWITCH	4	
SW6805,06		ESD14314	SWITCH	2	
VR6801		EVUJ16E04B24	V.RESISTOR 20K	1	
			MISCELLANEOUS		
		VMD1047	LED HOLDER	2	
		VGU3364	SLIDE KNOB	2	
	■	VEP01310A	POWER C.B.A.		INCLUDING THE POWER
					INLET C.B.A.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
					(VEP01311A)(NLA)
			CAPACITORS		
C1002		ECQU2A683MN	P.CAPACITOR 100V 0.068U	1	
C1003		ECEA2DG010S	E.CAPACITOR 200V 1U	1	
C1004,05		VCC0016	.CAPACITOR 400V 100P	2	
C1006-08		VCC0021	.CAPACITOR 400V 470P	3	
C1009		ECOS2GU820B	E.CAPACITOR 400V 82U	1	
C1010		ECKD3D151KB	C.CAPACITOR 2KV 150P	1	
C1011		ECQE6473MZ	P.CAPACITOR 630V 0.047U	1	
C1012		ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1013		ECEA1AGE470	E.CAPACITOR 10V 47U	1	
C1014		ECQB1H472KH	P.CAPACITOR 50V 4700P	1	
C1015		ECEA1HFS100	E.CAPACITOR 50V 10U	1	
C1016		ECQP1101T404	M.CAPACITOR 100V 100P	1	
C1017		ECEA1DFZ681Z	E.CAPACITOR 20V 680U	1	
C1018		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1019		ECEA1AFZ331X	E.CAPACITOR 10V 330U	1	
C1020		ECEA0JEE331	E.CAPACITOR 6.3V 330U	1	
C1021		ECEA1HGE101	E.CAPACITOR 50V 100U	1	
C1022		ECEA1DFZ681Z	E.CAPACITOR 20V 680U	1	
C1023-25		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C1026		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1027		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1028		ECEA1CGE100	E.CAPACITOR 16V 10U	1	
C1029		ECEA1AGE101	E.CAPACITOR 10V 100U	1	
C1030		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C1033		ECEA1CGE101	E.CAPACITOR 16V 100U	1	
C1034		ECEA1AGE101	E.CAPACITOR 10V 100U	1	
D1002		MA178	DIODE	1	
D1004		S1WBA60	DIODE	1	
D1005,06		MA178	DIODE	2	
D1007		11EFS4	DIODE	1	
D1008		RL4ZLF-M1	DIODE	1	
D1009		MA185	DIODE	1	
D1010		FMBG14	DIODE	1	
D1011		AK04V2	DIODE	1	
D1012		MA2200B	DIODE	1	
D1013		MA4130L	DIODE	1	
D1014		VSD0002	DIODE	1	
D1015		AP01CV2	DIODE	1	
D1017		SV03YS	DIODE	1	
IC1001		STK5339A	IC	1	
L1001		ELF18D290A	COIL	1	
L1002		ELC07D220	COIL 22U	1	
P1001		VJP1394T	CONNECTOR(MALE)	1	
Q1001		STRD1806E	TRANSISTOR	1	
Q1003		2SD1275	TRANSISTOR	1	
Q1004		2SD1996	TRANSISTOR	1	
Q1005		2SD1992	TRANSISTOR	1	
Q1006		2SD1330	TRANSISTOR	1	(S,T)
QR1001		DTA143TVTV2	TRANSISTOR-RESISTOR	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R1002,03		ERG2SJ273	M.RESISTOR 2W 27K	2	
R1004		ERW2PKR30T	WIRE WOUND 2W 0.3	1	
R1005,06		ERG1SJ823	M.RESISTOR 1W 82K	2	
R1007		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R1009,10		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R1011		ERG2SJ680	M.RESISTOR 2W 68	1	
R1012		ERG3ANJ683	M.RESISTOR 3W 68K	1	
R1013		ERF2AK2R2	W.RESISTOR 2W 2.2	1	
R1014		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R1015,16		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R1017		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1018		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1019		ERG12ANJ332	M.RESISTOR 1/2W 3.3K	1	
R1020		ERD25FAJ100	C.RESISTOR 1/4W 10	1	
R1021		ERX1SJR20	M.RESISTOR 1W 0.20	1	
R1023		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
T1001		VLT0521	TRANSFORMER	1	
			MISCELLANEOUS		
		VJS1972	AC INLET	1	
		VJF0318	FUSE HOLDER	2	<!>
	■	VEP07438A	TIMER C.B.A.		INCLUDING THE IR
					RECEIVER C.B.A.
					(VEP06380E)(NLA)
			CAPACITORS		
C6701		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6702		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C6703		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6704		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C7501		ECRHA030E41	TRIMER 30P	1	
C7502		ECUM1H050DCN	CHIP 50V 5P	1	
C7503		ECUX1H104ZFN	CHIP 50V 0.1U	1	
C7504		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7505,06		ECUM1H220JCN	CHIP 50V 22P	2	
C7507		ECEA1HK100	E.CAPACITOR 50V 10U	1	
C7508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7509		ECUM1H331KBN	CHIP 50V 330P	1	
C7510		ECUX1H104ZFN	CHIP 50V 0.1U	1	
C7511		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7520		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C7521		ECUM1H102KBN	CHIP 50V 1000P	1	
C7522,23		ECUM1H561KBN	CHIP 50V 560P	2	
C7524		ECUM1H680JCN	CHIP 50V 68P	1	
C7525-28		ECUM1H271KBN	CHIP 50V 270P	4	
D6701		PN323B	PHOTO DIODE	1	
D7501		ERA15-01	DIODE	1	
D7502		MA165	DIODE	1	
D7503		MA4056	DIODE	1	
D7506-14		MA165	DIODE	9	
D7523		MA165	DIODE	1	
D7531		MA165	DIODE	1	
D7535		MA165	DIODE	1	
D7541		LN28RCPP	LED	1	
D7542		LN48YCPP	LED	1	
D7543,44		LN38GCPP	LED	2	
D7545,46		LN28RCPP	LED	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
DP7501		VSL0119A	DISPLAY TUBE	1	
IC6701		UPC1490HA	IC	1	
IC7501		M50935V4AD	IC	1	
IC7502		MN1220	IC	1	
IC7503		MN1280P	IC	1	
IC7505		MN1280T	IC	1	
L7501		VLQEL05F221K	COIL 220UH	1	
P7501		VJP1251T	CONNECTOR(MALE) 11P	1	
P7504		VJS1937	CONNECTOR (FEMALE)	1	
P7505		VJP1393T	CONNECTOR(MALE) 13P	1	
P7506		VJP1251T	CONNECTOR(MALE) 11P	1	
Q7501,02		2SD601	TRANSISTOR CHIP	2	
QR7501		DTA124EK	TRANSISTOR-RESISTOR	1	
QR7509		DTA144EK	TRANSISTOR-RESISTOR	1	
QR7510,11		DTC144EK	TRANSISTOR-RESISTOR	2	
QR7520-23		DTC144TK	TRANSISTOR-RESISTOR	4	
QR7524		DTC114EK	TRANSISTOR-RESISTOR	1	
QR7525		DTC144TK	TRANSISTOR-RESISTOR	1	
QR7526		DTC114EK	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6701		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6702		ERDS2TJ8R2	C.RESISTOR 1/4W 8.2	1	
R7501		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R7502		ERJ6GMYJ224	CHIP 1/16W 220K	1	
R7503		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R7504		ERJ6GMYK106	CHIP 1/16W 10M	1	
R7505		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7506,07		ERJ6GMYJ222	CHIP 1/16W 2.2K	2	
R7509		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R7510		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7511-14		ERJ6GMYJ103	CHIP 1/16W 10K	4	
R7515		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7519		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R7520-23		ERJ6GMYJ103	CHIP 1/16W 10K	4	
R7524-31		ERJ6GMYJ182	CHIP 1/16W 1.8K	8	
R7532		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7533		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7534		ERJ6GMYJ121W	M.RESISTOR CH1/16W 120	1	
R7535		ERDS1TJ220	C.RESISTOR 1/2W 22	1	
R7536		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7537		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7543		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7545		ERJ6GMYJ221	CHIP 1/16W 220	1	
R7546		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7547		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7548,49		ERJ6GMYJ473	CHIP 1/16W 47K	2	
R7550		ERJ6GMYJ561	CHIP 1/16W 560	1	
SW7540		VSP0296	SWITCH	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR6701		EVMLGGA00B15	V.RESISTOR 100K	1	
X7501		VSX0140A	CRYSTAL OSCILLATOR	1	
X7502		VSX0094A	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMD1047	LED HOLDER	6	
		VJF0548	FIP HOLDER	1	
	■	VEP07459A	TV DEMODULATOR & TUNER		INCLUDING THE
			C.B.A.		CH SELECT C.B.A.
					(VEP07423C)(NLA)
			CAPACITORS		
C701		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C702		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C703		ECUM1H150JRN	C.CAPACITOR CH 50V 15P	1	
C704		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C705		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C706		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C707		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C708		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C709		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C710		ECUM1H050CCN	C.CAPACITOR CH 50V 5P	1	
C711		ECUX1H020CCN	CHIP 50V 2P	1	
C712		ECUM1H390JRN	C.CAPACITOR CH 50V 39P	1	
C713-16		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C717		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C718		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C719		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C720		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C721		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C722		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C723		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C724		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C725		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C726		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C727		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C728		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C729		ECUM1H561KCN	C.CAPACITOR CH 50V 560P	1	
C730		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C731		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C732		ECUM1H680JLN	C.CAPACITOR CH 50V 68P	1	
C733		ECUM1H330JPN	C.CAPACITOR CH 50V 33P	1	
C734		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C735		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C736		ECUX1H220JCN	CHIP 50V 22P	1	
C737		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C739		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C740		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C741		ECUM1H050CCN	C.CAPACITOR CH 50V 5P	1	
C742,43		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C744		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C745,46		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C747,48		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C749,50		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C751		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C752		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C753		ECUM1H820JPN	C.CAPACITOR CH 50V 82P	1	
C754,55		ECUX1H470JCN	CHIP 50V 47P	2	
C756		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C757		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C759		ECUX1H100DCN	CHIP 50V 10P	1	
C760		ECUM1H121JPN	C.CAPACITOR CH 50V 120P	1	
C761,62		ECQB1H103JH	P.CAPACITOR 50V 0.01U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C763		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C764		ECUX1H101JCN	CHIP 50V 100P	1	
C765		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C766		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C767		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C768		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C769		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C770		ECUM1H560JPN	C.CAPACITOR CH 50V 56P	1	
C771		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C773		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C774		ECQB1H182JH	P.CAPACITOR 50V 1800P	1	
C775		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C776		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C778		ECUX1H680JCN	CHIP 50V 68P	1	
C780		ECUX1H220JCN	CHIP 50V 22P	1	
C781		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C784		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C786		ECQB1H682JH	P.CAPACITOR 50V 6800P	1	
C787		ECEA1CKN220	E.CAPACITOR 16V 22U	1	
C788		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C791		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C792		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C793		ECUX1H330JCN	CHIP 50V 33P	1	
C794		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C796		ECUX1H151JCN	CHIP 50V 150P	1	
C799		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C7551		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7552		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7553		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7554		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C7555,56		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7557		ECEA1HK100	E.CAPACITOR 50V 10U	1	
C7558		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7559		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7560,61		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7563		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7564		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7565		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7569		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
D701,02		MA856	DIODE	2	
D704		MA165	DIODE	1	
D706		MA165	DIODE	1	
D707		RD9.1JB2	DIODE	1	
D708,09		MA165	DIODE	2	
D710		MA29W	DIODE	1	
D711		MA3100L	DIODE	1	
D714,15		MA165	DIODE	2	
D717		MA856	DIODE	1	
D7554		MA165	DIODE	1	
IC701		M51419SP	IC	1	
IC702		VCR0244	IC	1	
IC704		TDA1048G	IC	1	
IC705		UPC1167C2	IC	1	
IC7551		AN5043	IC	1	
L701,02		VLQEL05F151K	COIL 150UH	2	
L703		VLQEL05F680K	COIL 68UH	1	
L704,05		ELQT1R0KB	COIL 1UH	2	
L707		VLQEL05F680K	COIL 68UH	1	
L708		VLQEL05F100K	COIL 10UH	1	
L709		VLQEL05F8R2K	COIL 8.2UH	1	
L710,11		VLQEL05F151K	COIL 150UH	2	
L713		VLQEL05F100K	COIL 10UH	1	
L714		ELQT1R0KB	COIL 1UH	1	
L715		VLQEL05F680K	COIL 68UH	1	
L716,17		VLQEL05F820K	COIL 82UH	2	
L719		VLQEL05F180K	COIL 18UH	1	

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L720		VLQEL05F220K	COIL 22UH	1	
L721		ELQTR47XB	COIL	1	
L722		VLQEL05F270K	COIL 27UH	1	
L725		VLQEL05F151K	COIL 150UH	1	
P7501		VJS1238T	CONNECTOR	1	
P7551		VJP1251T	CONNECTOR(MALE) 11P	1	
P7551		VJS1238T	CONNECTOR	1	
Q701		2SC1047	TRANSISTOR	1	(C)
Q702		2SD601	TRANSISTOR CHIP	1	
Q703		2SD601	TRANSISTOR CHIP	1	(S,T)
Q705		2SD638	TRANSISTOR	1	
Q706		2SD601	TRANSISTOR CHIP	1	
Q707		2SD636	TRANSISTOR	1	(Q,R,S,T)
Q708		2SC2188	TRANSISTOR	1	
Q712		2SC2404	TRANSISTOR CHIP	1	(C)
QR701		UN2211	TRANSISTOR-RESISTOR	1	
QR702		UN2216	TRANSISTOR-RESISTOR	1	
QR703,04		UN2213	TRANSISTOR-RESISTOR	2	
QR706		UN2213	TRANSISTOR-RESISTOR	1	
QR709		UN2211	TRANSISTOR-RESISTOR	1	
QR710,11		UN2213	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R701		ERJ6GEYJ331	CHIP 1/16W 330	1	
R702		ERJ6GEYJ681	CHIP 1/16W 680	1	
R703		ERJ6GEYJ682	CHIP 1/16W 6.8K	1	
R704		ERD2FCG330	C.RESISTOR 2W 33	1	
R705		ERJ6GEYJ181	CHIP 1/16W 180	1	
R706		ERJ6GEYJ271	CHIP 1/16W 270	1	
R707		ERJ6GEYJ152	CHIP 1/16W 1.5K	1	
R708		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R709		ERJ6GEYJ222	CHIP 1/16W 2.2K	1	
R710		ERJ6GEYJ684	CHIP 1/16W 680K	1	
R711,12		ERJ6GEYJ562	CHIP 1/16W 5.6K	2	
R713		ERJ6GEYJ751	CHIP 1/16W 750	1	
R714		ERJ6GEYJ331	CHIP 1/16W 330	1	
R715		ERDS2TJ274	C.RESISTOR 1/4W 270K	1	
R716		ERJ6GEYJ334	CHIP 1/16W 330K	1	
R717		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R718		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R719		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R720		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R721		ERJ6GEYJ682	CHIP 1/16W 6.8K	1	
R722		ERJ6GEYJ152	CHIP 1/16W 1.5K	1	
R723		ERJ6GEYJ223	CHIP 1/16W 22K	1	
R724		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R725		ERJ6GEYJ151	CHIP 1/16W 150	1	
R726		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R727		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R728		ERJ6GEYJ181	CHIP 1/16W 180	1	
R729		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R730		ERJ6GEYJ184	CHIP 1/16W 180K	1	
R731		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R732		ERJ6GEYJ274	CHIP 1/16W 270K	1	
R733		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R734		ERJ6GEYJ562	CHIP 1/16W 5.6K	1	
R735		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R736		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R737		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R738		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R739		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R740		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R741		ERJ6GEYJ562	CHIP 1/16W 5.6K	1	
R742		ERD2FCG330	C.RESISTOR 2W 33	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R743		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R744		ERJ6GEYJ561	CHIP 1/16W 560	1	
R745		ERJ6GEYJ101	CHIP 1/16W 100	1	
R746		ERJ6GEYJ822	CHIP 1/16W 8.2K	1	
R747		ERJ6GEYJ101	CHIP 1/16W 100	1	
R748		ERJ6GEYJ472	CHIP 1/16W 4.7K	1	
R749		ERJ6GEYJ822	CHIP 1/16W 8.2K	1	
R750		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R752		ERJ6GEYJ123	CHIP 1/16W 12K	1	
R753		ERJ6GEYJ272	CHIP 1/16W 2.7K	1	
R754		ERJ6GEYJ333	CHIP 1/16W 33K	1	
R755		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R756		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R757		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R758		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R759		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R765		ERD2FCG220	C.RESISTOR 2W 22	1	
R766		ERJ6GEYJ821	CHIP 1/16W 820	1	
R767		ERJ6GEYJ822	CHIP 1/16W 8.2K	1	
R768		ERD2FCG220	C.RESISTOR 2W 22	1	
R770		ERJ6GEYJ330	CHIP 1/16W 33	1	
R773		ERJ6GEYJ562	CHIP 1/16W 5.6K	1	
R775		ERJ6GEYJ391	CHIP 1/16W 390	1	
R776		ERJ6GEYJ681	CHIP 1/16W 680	1	
R777		ERJ6GEYJ473	CHIP 1/16W 47K	1	
R778		ERJ6GEYJ222	CHIP 1/16W 2.2K	1	
R779		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R780		ERJ6GEYJ333	CHIP 1/16W 33K	1	
R781		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R782		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R788,89		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R790		ERJ6GEYJ473	CHIP 1/16W 47K	1	
R793		ERJ6GEYJ183	CHIP 1/16W 180K	1	
R794		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R795		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R796		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R797		ERJ6GEYJ561	CHIP 1/16W 560	1	
R798		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R799		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R7551,52		ERJ6GEYJ473	CHIP 1/16W 47K	2	
R7553		ERJ6GEYJ104	CHIP 1/16W 100K	1	
R7554		ERJ6GEYJ124	CHIP 1/16W 120K	1	
R7555		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R7556		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7557		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7569		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R7570		ERJ6GEYJ223	CHIP 1/16W 22K	1	
R7571		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7572		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R7573		ERJ6GEYJ222	CHIP 1/16W 2.2K	1	
T702		EIV5EC008A	TRANSFORMER	1	
T703		EIV5EC023A	TRANSFORMER	1	
T704		EIV5EC006A	TRANSFORMER	1	
T705		EIV5EC016A	TRANSFORMER	1	
T706		EIS5EC011A	TRANSFORMER	1	
T707		EIS5EC005A	TRANSFORMER	1	
VR701-07		EVND4AA00B14	V.RESISTOR 10K	7	
X701		EFCH38MMK1N	CRYSTAL OSCILLATOR	1	
X702		EFCS5M6MW3	CRYSTAL OSCILLATOR	1	
X704		EFCS6M65MW3B	CRYSTAL OSCILLATOR	1	
X705		EFCA4R5MB3	CERAMIC FILTER 4.5MHZ	1	
X707		EFCS5R5MS4	CERAMIC FILTER 5.5MHZ	1	
X708		EFCH32MVK3	CRYSTAL OSCILLATOR	1	
X709		EFOA500KS5A	CRYSTAL OSCILLATOR	1	
X711		EFCA4R5MB3	CRYSTAL OSCILLATOR	1	

To guarantee the FUNCTION,SAFETY and RELIABLITY of repaired units,only use ORIGINAL REPLACEMENT
PARTS which are listed with their part numbers in this parts list section.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VJF0374	C.B.A HOLDER	1	
		VSC2233	VIF SHIELD CASE (MAIN)	1	
		VSC2409	VIF SHIELD CASE (TOP)	1	
		VSC2410	VIF SHIELD CASE (BOTTOM)	1	
		VSC2411	SIF SHIELD CASE (MAIN)	1	
		VSC2412	SIF SHIELD CASE (TOP)	1	
		VSC2413	SIF SHIELD CASE (BOTTOM)	1	
	■	VEP00K62A	CYLINDER DRIVE C.B.A.		(NLA)
			CAPACITORS		
C2901		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2902		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2903		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2904		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2905		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2906		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2907		ECQV1H823JS	MYLAR 50V 0.082U	1	
C2908		ECUM1E473KBM	CHIP 25V 0.047U	1	
C2909		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2910		ECEA1CKS100	ELECTROLYTIC 16V 10U	1	
C2911		ECEA1CKS100	ELECTROLYTIC 16V 10U	1	
C2912		ECEA0JKS220	ELECTROLYTIC 6.3V 22U	1	
			INTEGRATED CIRCUIT		
IC2901		AN3814K	IC	1	
			RESISTOR		
R2901		ERX12ANJR68	METAL OXIDE 1/4W 0.68	1	
			CONNECTORS		
P2901		VJP1232T		1	
P2902		VJP1927		1	
			MISCELLANEOUS		
		VSC1843	SINK HEAT	1	
		VMA6884	MAIN HOLDER	1	
					-
	■	VEK3583	MECHANISM CONNECTION C.B.A.		(NLA)
			CONNECTORS		
P1504		VJS2342	CONNECTOR	1	
P1505		VJP1242T	CONNECTOR	1	
			RESISTORS		
R1501		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R1502		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEK3555	REEL SENSOR C.B.A.		
			INTEGRATED CIRCUIT		
IC1501		ON2170	IC	1	
			CONNECTOR		
P1506		VJP1242T	CONNECTOR	1	
	■	VXA2689	LED C.B.A.		(NLA)
			DIODE		
D1501		GL450	PHOTO DIODE	1	
			MISCELLANEOUS		
		VMD0911	LED HOLDER	1	
	■	VEK3577	TAKE UP PHOTO Tr. C.B.A.		(NLA)
			CAPACITOR		
C1502		ECKF1H102KB	C.CAPAITOR 50V 1000P	1	
			CONNECTOR		
P1508		VJS2165	CONNECTOR	1	
			TRANSISTOR		
Q1502		PN150NV	TRANSISTOR	1	
			RESISTOR		
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
		VMD0645	PHOTO Tr. HOLDER	1	
	■	VEK3578	SUPPLY PHOTO Tr. C.B.A.		(NLA)
			CAPACITOR		
C1501		ECKF1H102KB	C.CAPAITOR 50V 1000P	1	
			TRANSISTOR		
Q1501		PN150NV	TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	PHOTO Tr. HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP66038A	REMOTE CONTROL UNIT C.B.A.		(NIA)
			CAPACITORS		
C1		ECEA0GKS101	E.CAPACITOR 4V 100U	1	
C2		ECKF1H121KB	C.CAPACITOR 50V 120U	1	
C3		ECKF1H121KB	C.CAPACITOR 50V 120U	1	
C4		ECQB1H222KH	M.CAPACITOR 50V 2200P	1	
			DIODES		
D1		LN66-S	LED	1	
D2		MA165	DIODE	1	
D3		MA165	DIODE	1	
D4		MA165	DIODE	1	
D5		MA165	DIODE	1	
D6		MA165	DIODE	1	
D7		MA165	DIODE	1	
D8		MA165	DIODE	1	
D9		MA165	DIODE	1	
			INTEGRATED CIRCUIT		
IC1		MN6011M	IC	1	
			COMBINATION PARTS		
			(TRANSISTOR & RESISTORS)		
QR1		UN1231	TRANSISTOR-RESISTOR	1	
			RESISTOR		
R1		ERDS2TJ1R0	C.RESISTOR 1/2W 1	1	
			CRYSTAL OSCILLATOR		
X1		VSX0201	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJR0374	ELECTRODE (+)	1	
		VJR0375	ELECTRODE (-)	1	
	■	VEP66039B	DIGITAL SCANNER C.B.A.		(NIA)
			CAPACITORS		
C01		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C02		ECEV1HAN010R	E.CAPACITOR 50V 1U	1	
C03		ECUM1E104ZFM	CHIP 25V 0.1U	1	
C04		ECUM1E104ZFM	CHIP 25V 0.1U	1	
C05		ECSE1CY105Z	T.CAPACITOR 16V 1U	1	
C06		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C07		ECUM1H330JCN	CHIP 25V 33P	1	
C08		ECUM1H330JCN	CHIP 25V 33P	1	
C09		ECUM1H103ZFN	CHIP 25V 0.01U	1	
C10		ECUM1H103ZFN	CHIP 25V 0.01U	1	
C11		ECUM1H103ZFN	CHIP 25V 0.01U	1	
C12		ECUM1H103ZFN	CHIP 25V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D01		MA151WK	DIODE	1	
D04		MA151WK	DIODE	1	
D05		MA153	DIODE	1	
D06		SE303ACY	DIODE	1	
			INTEGRATED CIRCUITS		
IC01		MN158453VPB	IC	1	
IC02		UPC324G2	IC	1	
IC03		RC78L02UAA1	IC	1	
			COIL		
L01		ELT3K017B	COIL	1	
			LCD		
LCD01		VSL0131A	LCD	1	
			TRANSISTORS		
Q01		2SB710	TRANSISTOR	1	(Q,R,S)
Q02		2SB710	TRANSISTOR	1	(Q,R,S)
Q03		2SB709	TRANSISTOR	1	(Q,R,S)
Q05		2SB709	TRANSISTOR	1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTORS)		
QR04		FA1L4Z	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R01		ERJ6GMYJ560	CHIP 1/16W 56	1	
R02		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R03		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R04		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R05		ERJ6GMYJ202	CHIP 1/16W 2K	1	
R06		ERJ6GMYJ244	CHIP 1/16W 240K	1	
R07		ERJ6GMYJ162	CHIP 1/16W 1.6K	1	
R08		ERJ6GMYJ224	CHIP 1/16W 220K	1	
R09		ERJ6GMYJ474	CHIP 1/16W 470K	1	
R10		ERJ6GMYK106	CHIP 1/16W 10M	1	
R11		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R12		ERJ6GMYK106	CHIP 1/16W 10M	1	
R13		ERJ6GMYJ361	CHIP 1/16W 360	1	
R14		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R15		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R16		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R17		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R18		ERJ8GCYJ120	CHIP 1/8W 12	1	
R19		ERJ6GMYJ474	CHIP 1/16W 470K	1	
R21		ERJ6GMYJ474	CHIP 1/16W 470K	1	
R23		ERJ6GMYJ681	CHIP 1/16W 680	1	
R24		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R29		ERJ8GCYJ150	CHIP 1/8W 15	1	
			SENSOR		
SN01		VSQ0567	SENSOR		
			SWITCH		

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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
SW01		VSS0126	SLIDE SW	1	
SW02		EVQQFVO2K	SWITCH	1	
			VARIABLE RESISTOR		
VR09		EVND4KA00B25	V.RESISTOR 20K	1	
			CRYSTAL OSCILLATORS		
X01		VSX0246	CRYSTAL OSCILLATOR	1	
X02		EFBAL30D001K	BUZZER	1	
			MISCELLANEOUS		
		VGQ1406	TERMINAL BASE	1	
		VJR0401	TERMINAL ANGLE	2	
		VMX1324	SPACER	1	

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